USING R&D TAX INCENTIVES TO LEVERAGE CANADA FOUNDATION FOR INNOVATION CONTRIBUTIONS

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1) INTRODUCTION

This paper was commissioned by the Association of Universities and Colleges of Canada (AUCC). Its purpose is to explore ways for AUCC members to attract and obtain more funding for their research infrastructure by taking advantage of funding from the Canada Foundation for Innovation (CFI) and the federal and provincial scientific research and experimental development (SR&ED) tax incentives.

The CFI offers a unique opportunity for universities to renew and modernize their research infrastructure. As CFI will fund only 40% of eligible research infrastructure costs, universities will need to assume the remaining 60% of the costs. This will compel cash-strapped universities to turn to their funding partners for assistance, first and foremost to their respective provincial governments.

The private sector is another source of potential partners. However, experience has shown that private sector companies are interested primarily in making use of existing university research capacity and considerably less so in creating capacity. These companies tend to view the creation of research infrastructure as a public responsibility. As such, obtaining direct funding from the private sector for new research infrastructure may be difficult.

One relatively untapped source of indirect funding for research infrastructure is the various federal and provincial SR&ED tax incentives. These tax incentives apply to research carried out by universities, rather than the purchase of research infrastructure by universities. Universities are not eligible for these tax incentives, though they are available to taxpayers contributing to university research.

At first blush, there is very little overlap between the CFI funding and the SR&ED tax incentives. The object of this paper is to attempt to reconcile the apparent contradiction between the CFI requirement that funding go towards acquiring, developing or modernizing research infrastructure and the SR&ED tax incentive requirement that taxpayer funding be used for research activities.

This paper explores how and where the CFI funding and the SR&ED tax incentives overlap. The key to resolving the apparent contradiction is to view private sector funding as a source of institutional resources that can be applied, in whole or in part, to CFI-funded projects.

The discussion of the SR&ED rules in this paper is focused primarily on the federal rules. Many provinces provide their own SR&ED tax incentives in addition to the federal incentives. Certain provinces, notably Ontario and Quebec, provide enhanced SR&ED incentives to taxpayers contributing to eligible research at a university. Where an AUCC member is located in such a province, its ability to attract external research funding may be further enhanced. Appendix B provides a brief summary the provincial tax rules.

Additional comments regarding Ontario and Quebec SR&ED rules can be found where the Ontario or Quebec rules significantly diverge from the federal ones.

This paper begins in Chapter 2 with a brief examination of the main types of external research funding and the tax treatment of such contributions under the federal tax rules. Brief comments on provincial SR&ED incentives are also included. The chapter contains recommendations of how funding should be structured to best fit the federal tax requirements. A more detailed discussion of the federal tax rules is found in Appendix A.

Chapter 3 deals with partner contributions for the purpose of obtaining the corresponding funding from CFI. The particular focus is how research funding from external contributors that may not be explicitly earmarked for research infrastructure can nonetheless become institutional funding eligible as partner funding.

Chapter 4 provides various examples to illustrate the concepts discussed in Chapters 2 and 3.

Chapter 5 canvasses the problematic area of contributions-in-kind by external contributors. Both CFI and Revenue Canada have expressed concerns about this type of contribution.

Chapter 6 concludes this paper.

For the purposes of this paper, a university member of the AUCC is referred to as an institution since the scope is restricted to universities in Canada. All legislative references are to the *Income Tax Act (Canada)* (the "Federal Act"), unless otherwise specified. This paper reflects the tax law, proposed amendments and Revenue Canada's administrative practice as of April 1, 1998.

Please note that this paper is not intended as tax advice to any particular taxpayer. AUCC members should advise taxpayers making research contributions to discuss the tax implications with their own tax advisors prior to making the contributions.

2) FORMS OF EXTERNAL NON-GOVERNMENT R&D FUNDING

External non-government funding for research carried out by an institution generally comes in three forms: charitable donations, contract payments, and third-party payments.

a) Charitable Donations

A charitable donation is a gift of cash or other property to an institution. The contributor does not receive anything in return. The contributor would generally either get an income deduction (for a corporate donor) or a charitable donation tax credit (for an individual donor) for the donation. Assuming the contributor is a Canadian corporation, the effective cost of a $100 donation is about $55.38.[1]

Since SR&ED tax incentives are not available to the contributor in this case, it is less attractive to the contributor than the two other forms of research contributions discussed below. Therefore, this paper will not further discuss this form of contribution.

b) Contract Payments

Where a taxpayer contracts directly with an institution to have the institution perform eligible research on the taxpayer's behalf, the taxpayer may be eligible for SR&ED tax incentives for the contract amount. In consideration for the funding, the taxpayer generally obtains all the intellectual property rights to the research results; for example, clinical trials conducted on behalf of a pharmaceutical company. Where the taxpayer obtains rights to exploit the research rather than ownership of the intellectual property, the payment is likely to be a third party payment, as discussed later in this chapter.

The federal SR&ED tax incentives generally consist of a full deduction of the contract payment and a 20% non-refundable SR&ED investment tax credit. This tax credit can only be used to the extent that there is Part I income tax payable[2] by the taxpayer in the current year. Any unused tax credit can be carried forward 10 years or carried back 3 years to offset Part I tax payable in any of those years.

The effective cost of a $100 contract payment for SR&ED purposes may be as low as $44.30 as shown in Example 1.[1] The effective cost may be less after accounting for available provincial SR&ED incentives (see Appendix C).

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[1] Assumptions: 1) the taxpayer qualifies for the 20% SR&ED tax credit; 2) federal tax rate of 29.12%; 3) provincial tax rate of 15.5%; and 4) the taxpayer can utilize the tax credit and the $100 deduction.

***Example 1**: 20% SR&ED Tax Credit*
(See footnote 3 for assumptions)

Contract payment	*$100.00*
Tax credit (20%)	*($20.00)*
Tax deduction of $80 ($100 - tax credit):	
Federal (29.12%)	*($23.30)*
Provincial (15.5%)	*($12.40)*
After-Tax Cost	***$ 44.30***

As shown in Appendix C, after accounting for provincial SR&ED tax incentives, the effective after-tax cost may be reduced to as little as $30.65.

Certain small private Canadian companies[2] qualify for the enhanced federal 35% refundable SR&ED investment tax credit (see Example 2 below). This tax credit may be fully refundable if it exceeds the income tax payable by the taxpayer. Generally, only up to the first $2 million of eligible SR&ED expenditures per year qualify for the enhanced 35% tax credit. Any excess qualifies only for the 20% tax credit.

As shown in Example 2, the effective cost of a $100 contract payment may be as low as $36.[3] The effective cost may be less if there are provincial SR&ED incentives. After accounting for provincial SR&ED tax incentives, the effective after-tax cost may be reduced to as little as $22.42 (see Appendix C).

***Example 2**: 35% SR&ED Tax Credit*
(See footnote 5 below for assumptions)

Contract payment	*$100.00*
Tax credit (35%)	*($35.00)*
Tax deduction of $65 ($100 - tax credit):	
Federal (29.12%)	*($18.93)*
Provincial (15.5%)	*($10.08)*
After-Tax Cost	***$ 35.99***

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[2] A Canadian-controlled private corporation that meets both an income test and a size test may qualify for the 35% investment tax credit on some or all of its eligible SR&ED expenditures. The income test is based on the total taxable income of the company and all its associated companies. Generally, no 35% investment tax credit is available where the company and all its associated companies had a total taxable income of $400,000 or more for the previous taxation year. The size test is based on the total federal large capital tax (Part I.3 tax) payable by the company and all its other associated companies. Generally, no 35% investment tax credit is available when the company and all its associated companies had a total taxable capital (on which the large capital tax is based) of $15 million or more for the previous taxation year. Taxable capital is generally the shareholders equity plus certain liabilities less eligible investments. There are special rules where the company and its associated companies have different year ends.

[3] Assumptions: 1) the taxpayer qualifies for the 35% SR&ED tax credit on the payment; 2) federal tax rate of 29.12%; 3) provincial tax rate of 15.5%; and 4) the taxpayer can utilize the $100 deduction. In effect, it is assumed that the deduction is reducing income that would not be eligible for the small business deduction.

The investment tax credit and the deduction of the contract payment are available to the taxpayer based on the amount of eligible research done in a taxation year. For example, if the taxpayer pays for all of the research in year 1 but only one half of the eligible research is completed by the end of the year, only one half of the tax incentives can be claimed by the taxpayer at the end of year 1. The remaining incentives are available as the research is completed.

i) Eligible Research and Expenditures

In order for the taxpayer to obtain the SR&ED tax incentives, the research funded by the taxpayer must be eligible SR&ED. Not all research qualifies as SR&ED. Only research in the fields of science and technology qualifies. Activities such as teaching and patient care do not constitute SR&ED. Further, the research must be related to a business of the taxpayer.

Computer science, engineering, biology and physiology are some of the eligible research fields. Research in social sciences and humanities is specifically excluded from the definition of SR&ED. Although psychology is a social science, psychological research is not an excluded activity when it is undertaken directly in support of basic research, applied research or experimental development in other eligible fields.

The uses of the research funding may affect the taxpayer's eligibility for the SR&ED tax incentives as the federal act specifically excludes certain costs. The taxpayer's research expenses are not eligible for SR&ED incentives on the portion of the research contribution specifically allocated to fund such ineligible costs. Examples of ineligible costs include:

research carried on outside Canada;
rent, buildings and leasehold improvements;
capital equipment for which substantially all its useful life is not devoted to SR&ED, and used equipment;
expenditures to acquire patents or other rights held by another party; and,
endowment of a chair.

The contract amount must also be reasonable. The unreasonable portion may be disallowed and the resultant SR&ED tax incentives would decrease. Generally, a contract amount negotiated by arm's length parties is presumed to be reasonable. However, if the parties are acting in concert to achieve a particular result, the reasonableness issue needs examination. For example, if the parties set an unreasonably high price for a research project in order to disguise a contract payment that would otherwise have been a charitable donation, Revenue Canada will likely dispute the amount.

ii) Other Requirements

The Federal Act contains many other provisions governing the SR&ED incentives. They deal with various situations such as when the taxpayer itself receives funding (e.g. a government grant), when amounts are not paid at year end, when research is carried on through a partnership, etc. Although a detailed discussion of these requirements is beyond the scope of this paper, some are briefly discussed in Appendix A. The provinces also impose requirements, some of which are highlighted in Appendix B.

iii) Recommendations

To avoid potential SR&ED ineligibility issues, the contract should specify that the funding is designated to the institution to undertake a particular research project and that the research is to be conducted on behalf of the taxpayer. The agreement need not list all expenses that are to be incurred. However, if the contract lists all expenditures to be funded in detail, Revenue Canada will review each expenditure for eligibility, as discussed above.

For example, a contract may pay for salaries and supplies plus a mark-up to cover overhead. There is no problem with the institution using the overhead charge to pay for building improvements, even though such costs would be ineligible if paid for by the taxpayer on its own building.

c) Third-Party Payments

The third form of research funding is "third party payment"[3]. In this case, a contributor is wholly or partially funding an eligible research project or program of an institution. Again, the research must be related to a business of the contributor. Unlike a contract payment, however, the contributor does not get all the rights to the results of the research, though the contributor must be entitled to exploit the results of the research.

Revenue Canada indicated its position on the requirement of being entitled to exploit the results of the SR&ED in Paragraph 12 of its Interpretation Bulletin - IT-151R4 (a copy of which is in Appendix D). Revenue Canada considers this requirement to be met in cases where the contributor has the right to use a patent that results from the SR&ED project even if the contributor is charged a royalty or similar fee for the use of the patent. That requirement is also considered to be met in cases where the contributor is entitled to distribute and market any product that results from the SR&ED project. In addition, where it is likely that the SR&ED project will not result in a product or patent, the contributor will be considered to have met this requirement if it can be established that the contributor has, as a consequence of the payment, been granted a preferential right to use the results of the SR&ED in its business.

The tax treatment of a third party payment is, except in one respect, the same as a contract payment. The contributor may be eligible for the 20% or 35% federal SR&ED investment tax credit plus a current deduction of the payment. However, unlike a contract payment, the contributor obtains the full investment tax credit and full deduction of the third party payment in the year of the payment. Therefore, a third party payment attracts more favourable tax treatment than a contract payment. A payer of a third party payment receives the full benefit of SR&ED incentives up front even though the research project being funded will not be completed until a year or more in the future.

As is the case with a contract payment, the research must be related to a business of the contributor. Due to this requirement, the third party payment rules cannot be used to get an increased tax benefit for what is essentially a charitable donation. For example, a company engaged exclusively in the Internet security software business giving a contribution to a university for research for the cure of hemophilia would not get any SR&ED tax incentives on the contribution.

i) Eligible Research and Expenditures

Generally, the definitions of eligible research and expenditures are the same as those discussed above for contract payments. However, there is an exception for third party payments with respect to buildings and leasehold improvements of universities. Provided that the contributor does not have and is not reasonably expected to acquire an interest in the building, such expenditures are eligible SR&ED expenditures for tax purposes.

ii) Other Requirements

The Federal Act contains many other provisions governing the SR&ED incentives. They deal with various situations, such as when the taxpayer itself receives funding (e.g. a government grant), when amounts are not paid at year end, where research is conducted within a partnership, etc.

A detailed discussion of these requirements is beyond the scope of this paper. Some of these requirements are briefly discussed in Appendix A. The provinces also impose other requirements, some of which are briefly discussed in Appendix B.

iii) Recommendations

To avoid potential SR&ED ineligibility issues, the agreement between the contributor and the university should specify that the funding is for the institution to carry on the particular research project or program and that the contributor will get the right to exploit the results of the research. As discussed above, Revenue Canada generally requires that the contributor get a preferential right to exploit the results. Consequently, the agreement should specify the research to be carried out as well as describe the nature of the contributor's rights to exploit the results of the research.

If the research funding is only for salaries and other non-capital costs, there should be no problem with the contributor obtaining the tax incentives provided that the research is eligible. However, if the agreement specifies that there are capital expenditures to be funded, Revenue Canada may have a concern that part or all of the payment may be considered to be earmarked for the acquisition of non-eligible property. Revenue Canada is likely to examine closely the usage of the funded capital asset, and ask such questions as:

Will it be used partly for teaching or other non-eligible activities?
Will it be used partly for research in social sciences?
How might it be used after the research project is finished?

If the agreement only specifies that the funding is to be used in the overall research project or program and does not set out in detail the specific costs to be funded, there should be no problem with eligibility even if the institution chooses to use some of the funding for infrastructure.

As noted above, a contributor benefits from the full SR&ED tax incentives in the year of the payment even though the research may not be completed in that year. Revenue Canada has expressed concern about situations where the actual research does not commence shortly after the payment date. Where the research is not expected to be completed within two years from the date of the third party payment, it is further recommended that the contributor get a ruling from Revenue Canada to confirm that the payment would still be treated as a third party payment.

iv) Summary

In summary, a third party payment agreement should include:

the research project or program to be funded;
the amount to be paid in each year;
the nature of the contributor's rights to exploit the results of the research; and,
the portion of the project to be funded if the overall program contains non-eligible activities such as research in the social sciences or research outside Canada.

Generally, from a tax perspective, it is better to allow the institution the discretion to decide which costs (e.g. Salaries, overhead, infrastructure) will be covered by the funding, rather than having the contributor specify in the agreement.

3) PARTNER FUNDING FOR CANADA FOUNDATION FOR INNOVATION PURPOSES

a) General Information on CFI Funding

The purpose of the CFI funding is to assist the recipient institution in modernizing, acquiring or developing research infrastructure. Generally, the institution is required to own the infrastructure purchased or developed with CFI funding. However, as indicated in Appendix 7 of the February 1998 version of Policy and Program Guide issued by CFI (the "CFI Guide"), an institution is only required to hold a majority interest and exercise de facto control over the research infrastructure, generally for a period of five years from the date of acquisition and installment.

Infrastructure is defined as equipment, specimens, scientific collections, computer software, information databases, communication linkage and other intangible properties used or to be used primarily for carrying on research, including housing and installations essential for the use and servicing of the infrastructure.

According to the CFI Guide, research is defined as the "attempt to discover new facts, knowledge, and information, to develop new interpretations of facts, knowledge or information, or to discover new means of applying existing knowledge, relating to (a) science (b) health (c) engineering or (d) the environment."

The CFI Guide also outlines costs that are eligible for CFI funding. In general, eligible costs include all goods and services required to bring the new infrastructure into service, and maintenance costs that are included in the purchase price (e.g. normal warranties). Ongoing costs of operating a research facility and costs of conducting research are ineligible costs for CFI purposes. Examples of eligible costs are provided in the CFI Guide.

An eligible recipient is required to obtain partner or matching funding for 60% of the cost of research infrastructure before it qualifies for a 40% contribution from CFI. The CFI Guide indicates the following acceptable sources of partner funding:

institutional funds or trust funds held by the eligible recipient itself;
departments and agencies of the federal government, excluding the Medical Research Council, the Natural Sciences and Engineering Research Council, the Social Sciences and Humanities Research Council and the Networks of Centres of Excellence;
departments and agencies of provincial and municipal governments;
corporations;
voluntary organizations and foundations; and,
individuals.

b) Utilizing Non-government Funding as Partner Funding For CFI Purposes

At a first glance, the CFI funding program and the SR&ED tax incentives do not appear to dovetail as the former requires that partner funding assist in the modernization, acquisition or development of research infrastructure while the latter requires that the funding be used for research activities.

A research program includes both capital infrastructure costs and direct and overhead costs associated with the execution of the research program. As noted above, the ongoing costs of operating a research facility and the costs of conducting research are ineligible for CFI purposes. Yet these are the costs that are at the core of the SR&ED tax incentives. For SR&ED purposes, the contributor is required to fund research activities, that is, the direct costs of conducting the research – yet the CFI will only fund research infrastructure.

The key to reconciling this apparent contradiction is to view external research funding, whether contract payments or third party payments, as institutional funding for CFI purposes. As indicated above, institutional funds or trust funds held by an eligible recipient of CFI funding are acceptable sources of partner funding. Any institutional funds freed up or increased because of external research funding may be used towards eligible costs for CFI purposes.

The following outlines some ways to increase institutional funds through external funding:

revenue in excess of actual direct expenses from research contracts;
overhead contributions specified in research contracts; and,
- external research funding for research projects already partially funded by an institution - thus freeing up funds to use elsewhere.

These arrangements (and certain variations) are illustrated in greater detail in Chapters 4 and 5.

Institutions generally impose an overhead charge on research contracts to cover items such as maintenance and depreciation of existing infrastructure. Since depreciation is a non-cash expense, this portion of the overhead charge may be available to fund partially new or replacement infrastructure.

It should be noted that care must be taken not to violate the terms of other funding sources. For example, if certain costs are already covered specifically by a Medical Research Council grant, they cannot also be specifically funded by a third party payment.

Where the external funding agreement specifies that some of the funds are to be used for capital equipment or other infrastructure, this would, of course, qualify as partner funding directly. Contributions-in-kind can also be eligible partner funding for CFI purposes.

However, there are additional complexities in this area, as discussed in Chapter 5.

c) Research Eligible for CFI but Ineligible for SR&ED

The definition of research for CFI purposes is broader than the definition of SR&ED for tax purposes. As discussed above, research for CFI purposes encompasses science, engineering, health and environment. On the other hand, SR&ED includes only science and technology. Research in social sciences and humanities are not eligible for the SR&ED tax incentives while research in these two fields may be eligible for CFI funding.

Therefore, not all external research funding can be utilized for both CFI and SR&ED purposes. Where an institution has a contract with a taxpayer for conducting multi-disciplinary research (e.g. an environmental project involving engineering and social science), it is advisable to separate clearly the funding of the engineering portion from the funding of the social science portion in the contract. Only the portion relating to eligible SR&ED activities qualifies for the SR&ED tax incentives. See Arrangement 3 on page 17 for an example of how to construct such a project so that a contributor can take maximum advantage of available SR&ED incentives when research projects include a social sciences component.

4) EXAMPLES OF VARIOUS PARTNER FUNDING ARRANGEMENTS

This Chapter explores various arrangements to enhance an institution's ability to obtain partner funding for CFI purposes. In general, any external funding that allows the institution to fund the purchase of research infrastructure will qualify as partner funding for CFI purposes. The numbers used in these examples are purely illustrative.

The following are general facts for all arrangements:

an institution wants to conduct various research projects;
it currently has internal funds that can be allocated to these projects;
it plans to enhance its research infrastructure; and,
a number of outside parties are interested in contributing funds to research carried out by the institution.

The following are tax assumptions for all arrangements:

all the research (except the social science research in Arrangement 3) qualifies as SR&ED for income tax purposes;
the research contract payments are reasonable for the services provided;
any funds used for a building or leasehold improvements fit within the exception in s.37(8)(d)(iii) of the Federal Act, as discussed in Chapter 2; and,
all third party payments meet the requirements in s.37(1)(a)(ii) of the Federal Act.

ARRANGEMENT 1)

An institution enters into a research agreement with a taxpayer where the taxpayer gets all the rights to the results of the research to be conducted by the institution. More specifically:

The institution will perform specific research on behalf of the taxpayer over the coming year.
The contract amount to be paid by the taxpayer is 130% of the direct expenses (i.e. salaries, supplies, etc.) to be incurred by the institution. The 30% covers overhead and other indirect expenses, all of which are attributable to the research.
The total direct expenses incurred by the institution will be $5 million. Therefore, the total contract payment will be $6.5 million.
The institution will purchase $2 million of research equipment for this research project. The equipment will be used for other research activities later.

Example of Net Cost to the Taxpayer:

Assumptions:

All $6.5 million qualifies as eligible SR&ED expenditures;
The combined federal and provincial tax rate is 44.62%;
There are no provincial SR&ED incentives;
The taxpayer is eligible for the 20% SR&ED investment tax credit.

In this case, the net after-tax cost of a $6.5 million payment would be about $2.9 million as shown below:

Contract Payment	*$6.50 million*
Tax credit (20%)	*($1.30 million)*
Tax deduction of $5.2 million:	
(44.62% combined rate)	*($2.32 million)*
Net after-tax cost	*$2.88 million*

For CFI Purposes:

If some of the 30% that the taxpayer is charged to cover overhead and other indirect expenses is redirected towards the purchase of the equipment, that portion will be accepted by CFI as partner funding towards the purchase of the $2 million of research equipment. For example, if $1.2 million of the funds were used for the purchase of the equipment, CFI's contribution could be $0.8 million.

If the $2 million of equipment were to be used for proprietary research exclusively (e.g. research the results of which were solely owned by the taxpayer/funder), the equipment cost would not be eligible for CFI funding.

For SR&ED Purposes:

Revenue Canada's view is that the taxpayer would be eligible for the SR&ED tax incentives provided all other tax requirements are met. For example, the research must be related to a business of the taxpayer. (See Appendix A)

However, if the contract stipulated that $1.2 million of the $6.5 million total payment was earmarked specifically towards the purchase of equipment, Revenue Canada would look more closely at the planned uses of the equipment during and beyond the term of the contract. Revenue Canada would want to ensure that the equipment would continue to be used all or substantially all for SR&ED. If the contract does not stipulate that any funds are to be used for the purchase of property, Revenue Canada would only look at whether the activities constitute SR&ED and whether the payments are reasonable for the work performed (see comments in Chapter 2 on the concept of "reasonability").

Comments Relating to Ontario Tax Incentives:

Generally, provided the contract payment is eligible for the federal SR&ED investment tax credit, it will also be eligible for, among others, the additional 20% Ontario

Business-Research Institute Tax Credit. (See Appendix B for details). Note that this tax credit requires an advance ruling from the Ontario Ministry of Finance.

Comments Relating to Quebec Tax Incentives:

Generally, any contract payment eligible for the federal SR&ED investment tax credit is also eligible for the 40% Quebec income tax credit designed for eligible Quebec university research contracts. Some requirements must be met, such as obtaining a favourable advance income tax ruling from Revenue Quebec -- see Appendix B for details. Only 80% of the payment made to the eligible university entity is eligible for the 40% tax credit. The purpose of the reduction to 80% is to remove the overhead costs included in the payment.

If no favourable advance ruling is obtained, then 50% of the $6.5 million contract would be eligible for the Quebec R&D tax credit at the rate of 20%.

There are regulations to cover circumstances in which the taxpayer or a person related to the taxpayer subsequently purchases the equipment from the institution.

ARRANGEMENT 2)

A group of taxpayers makes contributions towards a large research program conducted by faculty at an institution. The taxpayers obtain limited preferential rights to the research results because their contributions only partially fund the research. More specifically:

The institution will conduct research costing $100 million, including the cost of a new research facility of $60 million.

- The taxpayers will contribute $36 million in cash to the institution towards this research. These contributions will be considered third party payments.
- The remaining funding for the research is from institutional and federal and provincial government sources, and possibly from CFI.

Note that the comments below also apply to a multi-university project scenario.

For CFI Purposes:

It does not matter whether or not the contracts with the contributors stipulate that the $36 million be used for the construction of the new $60 million facility. Provided that $36 million is available from the institution, directly from the external contributors or from other eligible funding partners for CFI purposes, it would qualify as partner funding as long as the facility is to be used for research purposes only.

For SR&ED Purposes:

Generally, the $36 million would qualify for the SR&ED tax incentives if all other requirements are met (see Appendix A). However, Revenue Canada would generally

not consider the payments to be third party payments if the contracts with the contributors stipulate that the $36 million be specifically and only used for the construction of the new research facility, since they would not be paying for research to be carried out.

Revenue Canada has another concern relating to when the research actually commences if there is a long construction period. Note, however, that the income tax rules do not stipulate when the SR&ED must commence in the case of third party payments. The rules simply require that the payment be for SR&ED.

Comments Relating to Ontario Tax Incentives:

Generally, provided the contract payment is eligible for the federal SR&ED investment tax credit, it will also be eligible for, among others, the additional 20% Ontario Business-Research Institute Tax Credit (see Appendix B for details). This tax credit requires an advance ruling from the Ontario Ministry of Finance.

The maximum total expenditures eligible for the 20% refundable Ontario Business Research Tax Credit is $20 million per year per corporate contributor. This limit is, however, to be shared among the contributor and all corporations associated with the contributor.

Note that if the research is carried out by several universities, only the portion carried out in Ontario is eligible for the Ontario Business-Research Institute Tax Credit.

Comments Relating to Quebec Tax Incentives:

80% of the $36 million payment would qualify for the Quebec R&D tax credit providing that each taxpayer obtains a favourable advance income tax ruling to qualify their payment as a payment to an eligible university entity. If the ruling is not obtained, then only 50% of the payment would be eligible for a tax credit at the rate of 20% rather than 40%.

ARRANGEMENT 3)

Non-government third parties make contributions towards an environmental research project, consisting of natural science and social science components, at an institution. More specifically:

The institution is going to conduct an environmental research project that will cost $2 million including a $200,000 cost to acquire a database.

The project consists of natural science and social science components. Of the $2 million of project cost, $1.2 million will be related to the natural science component.

A group of non-government partners will contribute $1 million in cash to the institution towards this research and the payments will be considered third party payments. The contributors will obtain limited preferential rights to the research results.

The remaining funding for the research is from the institution, federal and provincial

government sources, and possibly from CFI.

For CFI purposes:

It does not matter whether or not the contracts with the contributors stipulate that part of the $1 million be used for the acquisition of the database. Provided that $120,000 (60% of the cost of the database) is available from the institution, directly from the external contributors or other eligible funding partners for CFI purposes, it would qualify as partner funding.

For SR&ED purposes:

Not all of the project will qualify as SR&ED since only $1.2 million of the total $2 million project is related to the natural science research. The remaining $0.8 million relates to research in the social science (which is not an eligible SR&ED field).

It is recommended that the contracts with the contributors should specify what portion of the $1 million contribution is for natural science research. The entire $1 million may be eligible SR&ED expenditures if the contributors are funding only the natural science component; leaving the institution to fund the social sciences component from other sources. Otherwise, Revenue Canada may take the position that only a pro-rata portion of the contributions (e.g. (1.2 / 2.0) x $1 million) is for SR&ED.

If the contract specifies that the outside contributors will pay for all (or a portion) of the database, Revenue Canada may disallow all of the database funding on the basis that it is not used all or substantially all for the natural science research.

Comments Relating to Ontario Tax Incentives:

Generally, if the contract payment is eligible for the federal SR&ED investment tax credit then it will also be eligible for, among others, the additional 20% Ontario Business-Research Institute Tax Credit (see Appendix B for details). This tax credit requires an advance ruling from the Ontario Ministry of Finance.

Comments Relating to Quebec Tax Incentives:

Administratively, Quebec accepts Revenue Canada's determination of what qualifies as scientific research and development for tax purposes. Only 80% of the payment made to the eligible university entity is eligible for the 40% tax credit. The reduction to 80% removes the overhead costs included in the payment. If no favourable advance ruling is obtained then 50% of the contract payment would be eligible for the Quebec R&D tax credit at the rate of 20%.

5) CONTRIBUTIONS-IN-KIND

Contributions-in-kind pose the greatest difficulty to both CFI and Revenue Canada. The key issue is the valuation of the property contributed. CFI may consider contributions-in-kind as partner funding. However, the contributions-in-kind must be essential to the overall research project for which a CFI contribution is being sought. Due to uncertain tax issues in this area, it is recommended that any contributor should seek advice from its own tax advisor, and possibly a ruling from Revenue Canada, prior to making a contribution-in-kind.

CFI takes the view that a contributed property itself can constitute partner funding if deemed essential. For example, if an institution requires $10 million of research infrastructure and an external contributor contributes to the institution $2 million of such research infrastructure, the value of the contributed property could qualify as partner funding in obtaining a 40% contribution from CFI for the entire $10 million cost of the research infrastructure.

For tax purposes, there must still be a payment for SR&ED. The fact that the payment is made in-kind instead of cash does not alter the general requirements discussed earlier in this paper.

For both tax and CFI purposes, it is necessary to determine the value of the contribution. The CFI Guide differentiates between used and new property. In the case of new property, CFI accepts the selling price to the most favoured customer if the property is a stock item. In the case of used property, CFI accepts the fair market value if it is known, otherwise, the normal policies and procedures of the recipient institution should be followed to arrive at a value. Those normal policies and procedures reflect the requirements of Revenue Canada and the authorization processes followed by the institution when donations for which a registered charitable donation receipt is to be provided. For sizable amounts, an appraisal will be required. In the case of new tangible property created or manufactured by the contributor, the CFI Guide indicates that CFI accepts either 1) selling price to the most favoured customer (if the property is a stock item) or 2) the cost of manufacture (if it is one-of-a-kind).

For tax purposes, the contributor must incur an "expenditure". Where there is a contribution of property that the contributor purchased from an arm's length third party, the purchase cost to the contributor will likely be treated as the payment amount for tax purposes. Where the property is created or manufactured by the taxpayer, Revenue Canada may treat the actual cost of creating or manufacturing the goods (rather than the fair market value) as the amount eligible for the SR&ED tax incentives.

In the case of intangible property owned by the contributors, from Revenue Canada's perspective, the contributors may not get any SR&ED tax incentives if the contributors have not incurred any expenditures. For example, the granting of a site license for software does not actually cost a contributor any additional amount. Although the

contributor might incur an opportunity cost (the forgone sale of a site license to the institution), the tax rules require an actual expenditure.

For federal income tax purposes, it may be possible to ensure that the contributor has incurred an expenditure by having the contributor make a cash payment to the institution. The institution would then use the cash to buy the property from the contributor at fair market value. The contributor is then entitled to claim the $1 million cash contribution under the SR&ED tax rules.

However, there are some provincial problems with the previous treatment of the $1 million cash contribution. In Ontario, the purchase of property from a contributor can result in the reduction of expenditures eligible for the 20% refundable Ontario Business Research Institute Tax Credit. In Quebec, specific provisions are provided in the Quebec Taxation Act which do not permit a Quebec R&D tax credit to be claimed where consideration other than currency is given. Because of the uncertainties surrounding contributions-in-kind, contributors are advised to seek assistance from their tax advisor.

6) CONCLUSIONS

This paper discussed how the federal SR&ED tax incentives can assist an institution in obtaining partner funding for CFI purposes. While the institution cannot directly claim these tax incentives, it can, nonetheless, indirectly reap the benefit of these incentives.

The paper examined how the apparent contradiction between the SR&ED tax incentive requirements and the CFI requirements can be reconciled. As illustrated above, by attracting research funds from non-government sources, the institution can enhance its ability to obtain greater funding from CFI. The key is to characterize some of these research funds from outside contributors as institutional funds for CFI purposes.

The paper examined three types of research contributions and showed that a contributor's after-tax cost may be quite low where the research payment is eligible for the SR&ED tax incentives. The contributor's after-tax cost may be as low as 22.42 cents per dollar in certain circumstances, after accounting for provincial incentives. This low cost can be used as a marketing tool for the institution to attract research funding.

The paper also examined the differences between a contract payment and a third party payment. Generally, a contract payment involves a service provided to the taxpayer and the taxpayer owns the results thereof. A third party payment is a contribution to a research project or program where the taxpayer only obtains limited (preferential) rights to the results of the research.

A third party payment entitles a contributor to get the tax break in the year of payment even though the research may not be completed by the end of that year. In contrast, a contract payment attracts SR&ED tax incentives based only on the amount of research completed. The low cost to the contributor and the accelerated benefits are attractive features of a third party payment. Institutions should actively promote such types of contributions for larger research projects.

It is important for the contributor to follow all of the tax rules in order to obtain the anticipated tax benefits. While an institution can point out tax saving opportunities to contributors, it should not be providing tax advice to the contributor. Each contributor should discuss the tax consequences of its particular circumstances with its own tax advisors.

In summary, an institution can realize significant benefits by using the SR&ED tax incentives to attract external contributions to its research projects and programs. These contributions can be used, in part, as the requisite partner funding for CFI applications.

APPENDIX A:

Summary of Federal SR&ED Income Tax Incentives

The following is an overview of the general federal tax rules relating to scientific research and experimental development (SR&ED). In particular, only matters relating to contributions or payments to a university member of the Association of Universities and Colleges of Canada (AUCC) will be discussed. Such a member is referred to below as an institution.

It is assumed that every institution is an approved university referred to in clause 37(1)(a)(ii)(B) of the *Income Tax Act (Canada)* (the "Federal Act"). For the purposes of that provision, Revenue Canada stated in paragraph 11 of its Interpretation Bulletin, IT-151, that all Canadian universities and affiliated colleges are considered to be approved.

Where a taxpayer has a research contract with an institution, the contract amount may be eligible for the SR&ED tax incentives. The tax incentives include a full deduction of the contract amount and investment tax credits (ITC) that may be refundable in cash. The contract amount must be reasonable. If an expenditure is not reasonable, part or all of the tax incentives being claimed may be disallowed. Generally, a payment amount negotiated by arm's length parties is presumed to be reasonable. However, if the parties are acting in concert, the reasonableness issue needs examination. For example, if a third party payment is inflated to disguise a portion that would otherwise have been a charitable donation, the unreasonable portion could be disallowed as a non-SR&ED expenditure.

It is worth noting that the SR&ED rules are complex and there are numerous anti-avoidance rules and rules dealing with assistance received by the taxpayer. Generally, those rules are beyond the scope of this summary.

1) Eligible SR&ED Expenditures

Two types of research payments qualify for SR&ED tax incentives: contract payments and third party payments.

a) Contract Payments

Where a taxpayer contracts directly with an institution to have the institution perform eligible research on the taxpayer's behalf, the taxpayer may be eligible for the SR&ED tax incentives for the contract amount. In consideration for the funding, the taxpayer generally obtains all the intellectual property rights to the research conducted by the institution. The research must be related to a business of the taxpayer.

The SR&ED tax incentives are available to the taxpayer based on the amount of the eligible research done in a taxation year. For example, if only half of the eligible research is completed by the end of the taxpayer's year 1, only one half of the tax incentives can be claimed by the taxpayer at the end of its year 1. The remaining incentive is available as the eligible research is completed.

Third Party Payments

The second form of research funding is so-called "third party payment"[4]. In this case, a contributor is wholly or partially funding the institution's eligible research project or program. Unlike a contract payment, the contributor does not own all the rights to the research. Rather, the contributor is only entitled to exploit the results of the research – e.g. the contributor may obtain a license to use the results.

Revenue Canada indicated its position on the requirement of being entitled to exploit the results of the SR&ED (which is a subset of what is generally meant by "research and development" or "R&D" as discussed below) in one of its Interpretation Bulletins - IT-151R4 (a copy of which is found in Appendix B). Revenue Canada considers this requirement to be met in cases where the contributor has the right to use a patent that results from the SR&ED project even if the contributor is charged a royalty or similar fee for the use of the patent. That requirement is also considered to be met in cases where the contributor is entitled to distribute and market any product that results from the SR&ED project. In addition, where it is likely that the SR&ED project will not result in a product or patent, the contributor will be considered to have met this requirement if it can be established that the contributor has, as a consequence of the payment, been granted a preferential right to use the results of the SR&ED in its business.

The tax treatment of a third party payment is, except in one respect, the same as a contract payment. Unlike a contract payment, the contributor obtains the full SR&ED tax incentives in the year of the payment. It does not matter if the eligible research project being funded will not be completed until a year or more in the future. It is again required that the eligible research be related to a business of the contributor.

2) What are Eligible SR&ED Activities?

In order for the taxpayer to obtain the SR&ED tax incentives, the activities funded by the taxpayer must be eligible SR&ED activities. Not all R&D qualifies as SR&ED. Only R&D in the fields of science and technology qualifies.

SR&ED is defined in proposed s.248(1) of the Federal Act to mean "systematic investigation or search that is carried out in a field of science or technology by means of experiment or analysis and that is:

(a) basic research, namely, work undertaken for the advancement of scientific knowledge without a specific practical application in view,
(b) applied research, namely, work undertaken for the advancement of scientific knowledge with a specific practical application in view, or
(c) experimental development, namely, work undertaken for the purpose of achieving technological advancement for the purpose of creating new, or improving existing, materials, devices, products or processes, including incremental improvements thereto,

and, in applying this definition with respect to a taxpayer, includes:

work undertaken by or on behalf of the taxpayer with respect to engineering, design, operations research, mathematical analysis, computer programming, data collection, testing or psychological research, where the work is commensurate with the needs, and directly in support, of work described in paragraph (a), (b), or (c) that is undertaken in Canada by or on behalf of the taxpayer,

but does not include work with respect to:

(e) market research or sales promotion,
(f) quality control or routine testing of materials, devices, products or processes,
(g) research in the social sciences or the humanities,
(h) prospecting, exploring or drilling for, or producing, minerals, petroleum or natural gas,
(i) the commercial production of a new or improved material, device or product or the commercial use of a new or improved process,
(j) style changes, or
(k) routine data collection.

Therefore, research in social sciences and humanities are specifically excluded from the definition of SR&ED. As well, non-research activities such as teaching and patient care do not constitute SR&ED.

Computer science, engineering, biology and physiology would be some of the eligible

SR&ED fields. Social sciences include economics, geography, law, management, political science, and sociology. The humanities include art, philosophy, languages, history, and religion. Psychology is also a social science, but psychological research is not an excluded activity when it is undertaken directly in support of basic research, applied research, or experimental development in other eligible fields.

3) SR&ED Tax Incentives

a) Full Deduction and Indefinite Carryforward Period

Eligible SR&ED expenditures can be currently deducted. Any unused SR&ED expenditures can generally be carried forward to reduce income arising in any future years. In contrast, non-capital losses (i.e. business losses) can only be carried forward 7 years. This indefinite carry-forward period is especially beneficial where the full deduction cannot be utilized currently or within the next 7 years.

b) Investment Tax Credits

In addition, SR&ED investment tax credits (ITCs) may be earned. ITCs may be used to reduce federal Part I tax and, in certain cases, may be refundable in cash.

To determine the amount of ITCs that the taxpayer may earn, the taxpayer needs to determine its qualified expenditures. Qualified expenditures are generally the taxpayer's eligible SR&ED expenditures for the year less certain excluded expenses. Where the taxpayer itself is being funded by another entity, its qualified expenditures would be reduced where the funding is a "contract payment", "government assistance" or "non-government assistance" as defined in s.127(9) of the Federal Act.

If the qualified expenditures being claimed in a year by a taxpayer are not paid within 180 days from the end of that year, the taxpayer does not earn any ITCs until the year in which the expenditures are actually paid.

Where the contributor to the university research is a partnership, the federal SR&ED legislation (on which the provincial rules are also based) may restrict the partners from claiming ITCs. There are also SR&ED anti-avoidance rules and other rules limiting qualified expenditures. However, they are beyond the scope of this summary.

In general, ITCs are calculated as 20% of the qualified expenditures for the year. The ITCs can be used to offset federal Part I tax[4] payable for the year. Where the taxpayer is a Canadian-private-controlled corporation ("CCPC")[5] as defined in the Federal Act and it

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[4] Federal Part I income tax is the regular tax on income from business, property and employment.

[5] CCPC is defined in subsection 125(7). Generally, a CCPC is a private corporation resident in Canada that is not controlled directly or indirectly in any manner by non-resident persons, public corporations and any combination of them.

and all of its associated companies, if any, meet certain criteria[6], the tax credit rate is increased to 35% on up to $2 million of qualified expenditures annually.

Where the taxpayer is a qualifying corporation[7] (other than an excluded corporation[8]) for the purposes of section 127.1 of the Federal Act, some or all of its investment tax credits earned in a year are refundable in that year if they are not needed to offset federal tax payable. ITCs that are earned at the 35% rate on current expenditures (such as contract payments and third-party payments) are 100% refundable. Any ITCs that are earned at the 20% rate are only refundable at a rate of 40% (i.e. 8 cents of cash refund per every dollar of qualified expenditures).

If the taxpayer is a CCPC but not a qualifying corporation nor an excluded corporation, only the ITCs that are earned at a rate of 35% are refundable.

Any unused investment tax credits can be carried back 3 taxation years or forward 10 taxation years to offset other years' tax liabilities.

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[6] The $2 million limit is reduced where the total taxable income of the associated group in the last taxation year ending in the previous calendar year exceeded $200,000. The $2 million limit is also reduced where there was Large Corporation Tax (Part I.3 tax) payable by the group for its last taxation year ending in the previous calendar year. Where the total taxable income was $400,000 or higher or where the total Large Corporation Tax payable was $11,250 or more (i.e. total taxable capital of the group exceeded $15 million), no qualified expenditures would qualify for the 35% investment tax credit rate.

[7] "Qualifying corporation" is defined in subsection 127.1(2). A qualifying corporation must be a CCPC. In addition, where the CCPC is not associated with any other companies in a year, its taxable income in the preceding taxation year must not exceed its business limit (generally $200,000). Where the CCPC is associated, the total taxable income of the associated group for their last taxation year ending in the preceding calendar year must not exceed the total of the business limit of the group (generally $200,000 in total).

[8] An "excluded corporation" is defined in s.127.1(2) of the Federal Act. Generally, an excluded corporation is a tax-exempt corporation, a government, a Crown corporation or a corporation controlled by any of the above entities.

APPENDIX B:

Summary of Provincial SR&ED Income Tax Incentives

The following is a summary of the provincial SR&ED income tax incentives relating to university SR&ED contracts.

Besides the federal SR&ED tax incentives, many provinces also provide additional SR&ED tax incentives. In all provinces, the research contract amount is deductible for provincial income tax purposes.

The table below summaries the provincial incentives.

Province	Incentive	Refundable?	Permanent Establishment in the Province Required ?
British Columbia	None		
Alberta	None		
Saskatchewan	proposed 15% credit (announced in the 1998 Saskatchewan Budget)	No	Likely yes
Manitoba	15% credit	No	yes
Ontario	R&D Super-allowance (additional 25% to 52.5% deduction) 10% OITC (small CCPC's only) 20% OBRI Tax Credit	No Yes Yes	yes yes yes
Quebec	40% credit (However, Quebec law restricts the credit to 80% of that amount so that the effective credit is only 32%.)	Yes	No. But the claimant must carry on business in Canada.
New Brunswick	10% credit	No	yes
Nova Scotia	15% credit	yes	yes
Prince Edward Island	None		
Newfoundland	15% credit	yes	yes

Other than British Columbia, Alberta and Prince Edward Island, all other provinces provide provincial tax credits for research and development. These provincial tax credits are considered government assistance for federal SR&ED purposes and would reduce qualified expenditures eligible for the federal investment tax credit. Generally, a tax-exempt claimant is not eligible for these provincial tax incentives.

Saskatchewan

The province of Saskatchewan announced in its 1998-1999 Budget that it will provide a new 15% tax credit for eligible R&D expenditures incurred after budget day (i.e. after March 19, 1998). Eligible R&D expenditures are determined using the federal SR&ED rules.

This investment tax credit is non-refundable and can only be applied against Saskatchewan income tax payable for the year. Any unused credit can be carried back 3 years and carried forward 7 years.

Manitoba

The province of Manitoba provides a 15% research and development tax credit for eligible R&D expenditures incurred in Manitoba. Eligible R&D expenditures are determined using the federal SR&ED rules. A claimant needs to have a permanent establishment in Manitoba and must be a corporation.

This investment tax credit is non-refundable and can only be applied against Manitoba income tax payable for the year. Any unused credit can be carried back 3 years and carried forward 7 years.

Ontario

The province of Ontario provides three income tax incentives relating to SR&ED. All three requires that a claimant have a permanent establishment in Ontario and be a corporation. Eligible expenditures are generally based on the federal SR&ED rules.

R&D Super-allowance

The first one is the Ontario R&D Super-allowance. This is an additional deduction for SR&ED expenditures incurred in Ontario (on top of the regular deduction for SR&ED expenditures). This extra deduction varies with the type of claimant and the historical average SR&ED spending (i.e. the expenditure base).

A Canadian-controlled private corporation (CCPC) earns this Super-allowance at a rate of 52.5% on qualifying expenditures in excess of its expenditure base. Any remaining qualifying expenditures earn this Super-allowance at a rate of 35%.

Any other corporation earns this Super-allowance at rates of 37.5% and 25% for qualifying expenditures in excess of its expenditure base and any remaining expenditures, respectively.

Ontario Innovation Tax Credit (OITC)

The OITC is a 10% refundable tax credit and is only available to a corporation that is a CCPC through the year. The tax credit is earned on eligible expenditures incurred in Ontario. Eligible expenditures are determined using the federal SR&ED rules. The tax credit applies to the first $2 million of eligible expenditures per year. This $2 million limit is shared among all corporations that are associated for federal income tax purposes. Capital SR&ED expenditures attract a tax credit at an effective rate of only 4%.

This tax credit is first applied against Ontario income tax or capital tax payable for the year and other arrears. Any excess is refundable to the claimant.

Ontario Business-Research Institute Tax Credit (OBRI Tax Credit)

The OBRI Tax Credit is a new 20% refundable tax credit available to all corporations that have a permanent establishment in Ontario. Important regulations in support of this tax credit have not been released as of April 1, 1998 and it is not clear how some of the OBRI Tax Credit provisions will work.

This tax credit is first applied against Ontario income tax or capital tax payable for the year and other arrears. Any excess is refunded to the claimant. This tax credit only applies to contracts with eligible research institutes in Ontario which includes the Ontario universities. A claimant generally needs to apply for an advance ruling within 90 days from the date on which the university research contract is initiated. There is a $20 million annual expenditure limit on this tax credit. It is likely that this $20 million needs to be shared among corporations that are associated for federal income tax purposes.

There are complex anti-avoidance rules and restrictions for this tax credit. For example, a taxpayer "connected to the eligible research institute" performing the research cannot earn the OBRI Tax Credit. A "contribution" to the taxpayer from the eligible research institute performing the research would reduce the expenditures eligible for the OBRI Tax Credit.

There is also a restriction that the amount of expenditures eligible for the OBRI Tax Credit under the contract between a taxpayer and an eligible research institute cannot exceed the amount that would be expended by the taxpayer if the taxpayer had carried out the research directly in the same circumstances and under the same conditions.

Quebec

1. Introduction

Quebec offers attractive SR&ED tax incentives, particularly with respect to research carried out by an eligible university entity. The tax credits earned are fully refundable. These incentives are available to all taxpayers regardless of size and status provided they carry on business in Canada and undertake SR&ED activities in Quebec directly or indirectly through contracts with third parties.

Quebec SR&ED tax credits earned in Quebec are not taxable in Quebec nor reduce the SR&ED pool for Quebec purposes in the current or future years. However, they are considered to be government assistance in the current year for federal purposes and accordingly reduce the amount available for deduction and credit for federal purposes.

2. Quebec SR&ED Tax Incentives

Similar to the federal rules, eligible SR&ED expenditures can be currently deducted and any unused SR&ED expenditures can generally be carried forward to reduce income arising in any future years for Quebec purposes.

Generally taxpayers carrying on SR&ED in Quebec are entitled to tax credits at a rate of 20% of salaries paid to employees of an establishment located in Quebec for work performed in SR&ED activities in Quebec. The salary portion of amounts paid to subcontractors and independent workers for SR&ED performed in Quebec on behalf of a taxpayer is also eligible for tax credits and is deemed to be 50% of the contract amount for contracts between unrelated parties. Accordingly a taxpayer making a contract payment or third party payment to an institution would be entitled to a refundable Quebec tax credit of 10% of the cost of the contract (20% x 50%). Corporations meeting certain criteria (smaller companies) may be entitled to a preferential credit of 40% instead of 20% -- however, it is limited to the first $2 million of eligible salaries for the year.

A taxpayer who contracts with an eligible university entity to carry out SR&ED on its behalf may be entitled to an enhanced refundable tax credit at 40% of qualified expenditures. The 40% credit is available to all taxpayers carrying on business in Canada who have made a "university research contract" with an eligible university entity regardless of size and status. There is no expenditure limit applicable to amounts paid pursuant to a university research contract similar to the $2 million expenditure limit applicable to corporations entitled to the 40% rate on eligible salaries not related to university research contracts. Note, however, there are specific conditions such as favourable advance rulings that must be met. These are discussed in section 3. Generally, a taxpayer carrying on business in Canada who has entered into a contract with an eligible university entity will be entitled to a refundable tax credit equal to 40% of 80% of the amount of a qualified expenditure paid to the eligible university entity under the university research contract, effectively 32%. This reduction to 80% applies to all

cases. The logic for the 80% is to subtract overhead charges added in by the university so as to only give credits in respect of "actual" SR&ED expenditures.)

However, if the taxpayer is related to the eligible university entity, then the credit is computed on the portion of qualified expenditures reasonably attributed to expenditures made for SR&ED by the eligible university entity to carry out the SR&ED on behalf of the taxpayer.

Obviously there are significant additional Quebec tax benefits for taxpayers if a contract qualifies as an "university research contract" (32% of all expenses versus 10% as discussed above). Anti-avoidance rules have been put in place to prevent inflation of contract amounts either through the presence of multiple contracts or multiple parties. Further anti-avoidance rules also prevent Quebec SR&ED refundable tax credits being given for contributions in kind.

3. Criteria for Eligibility to the Quebec SR&ED tax credit

In order for a taxpayer to be entitled to the SR&ED tax credit for the university research contract, the following conditions must be met:

(a) The taxpayer must carry on business in Canada. It is not necessary to carry on business in Quebec, though the eligible university entity must carry out the SR&ED in Quebec.
(b) The contract must be with an eligible university entity (defined in Section 4) and the university must carry out the work itself in Quebec, i.e. it cannot subcontract the work out to a third party. In this respect, it is very important that the contract clearly define the eligible university entity and state that no work is to be subcontracted to a third party. If work is to be subcontracted to a third party, then the contract should stipulate the amount of the payment that will be subcontracted to the third party. This amount will clearly not be available for the SR&ED tax credits applicable to university research contracts. In certain cases, a linkage agency may act on behalf of the taxpayer, but it is important that the taxpayer's name be included in the contract to ensure the taxpayer is entitled to the tax credit.
(c) The R&D being carried out by the university on behalf of the taxpayer must be related to a business of the taxpayer.
(d) The taxpayer must have the right to exploit the results of the research done on their behalf. There is no requirement that this right of exploitation be exclusive.
(e) A favourable advance ruling must be obtained from the Ministère du Revenu du Québec ("Ministère") by the taxpayer for each eligible university research contract.

A separate advance ruling must be obtained for each contract even if there are several contracts with the same university entity. An advance ruling is a statement made by the Ministère to a taxpayer informing him in advance of the fiscal treatment which will be given to one or several definite transactions contemplated by a taxpayer. Technically,

amounts paid to the eligible university entity prior to obtaining a favorable ruling would not be eligible for credit unless the ruling request has been submitted on or before 90 days from the date of signing the contract and a favourable ruling is subsequently given. However, an advance ruling may be requested and obtained in certain limited circumstances where amounts have already been paid under the contract.

4. Eligible University Entity

Eligible university entity is a defined term in the Taxation Act (Quebec). Qualifying entities are the following:

(a) a Quebec university;
(b) a prescribed university hospital medical research centre;
(c) a subsidiary wholly-owned corporation of a centre mentioned in (b) that is constituted exclusively for the prosecution or promotion of SR&ED;
(d) a non-profit corporation under the authority of a centre mentioned in (b) constituted principally for the prosecution or promotion of SR&ED, one of whose members is such a centre; and
(e) any other prescribed body.

New Brunswick

The province of New Brunswick provides a 10% research and development tax credit for eligible R&D expenditures incurred in New Brunswick. Eligible R&D expenditures are determined using the federal SR&ED rules. A claimant needs to have a permanent establishment in New Brunswick and must be a corporation.

This investment tax credit is non-refundable and can only be applied against New Brunswick income tax payable for the year. Any unused credit can be carried back 3 years and carried forward 7 years.

Nova Scotia

The province of Nova Scotia provides a 15% refundable research and development tax credit for eligible scientific research expenditures incurred in Nova Scotia. Eligible expenditures are determined using the federal SR&ED rules. A claimant needs to have a permanent establishment in Nova Scotia and must be a corporation.

While the legislation refers to scientific research, a bulletin from the Nova Scotia government indicates that this tax credit also applies to experimental development.

This tax credit is first applied against Nova Scotia tax payable for the year and other arrears. Any excess is refundable to the claimant.

Newfoundland

The province of Newfoundland provides a 15% refundable research and development tax credit for eligible expenditures in respect of scientific research incurred in Newfoundland. Eligible expenditures are determined using the federal SR&ED rules. A claimant needs to have a permanent establishment in Nova Scotia and must be a corporation.

While the legislation refers to scientific research, the Minister of Finance of Newfoundland announced that it would also apply to experimental development.

This tax credit is first applied against Newfoundland tax payable for the year and other arrears. Any excess is refundable to the claimant.

APPENDIX C:

After-Tax Costs of SR&ED

This Appendix contains illustrative after-tax costs of research contributions.

The first scenario is the most general one. The taxpayer is a corporation is that only eligible for the 20% federal SR&ED investment tax credit. It is not eligible for the small business deduction.

The second scenario applies to a taxpayer that is eligible for the 35% federal SR&ED investment tax credit. It is assumed that the deduction arising from both federal and provincial SR&ED incentives reduces income that would otherwise not be eligible for the small business deduction.

The last scenario is similar to scenario 2. The difference is that the deduction arising from both federal and provincial SR&ED incentives is assumed to reduce income that would otherwise be eligible for the small business deduction.

After-tax cost of Research in Universities - Scenario 1 - Non-CCPC

General assumptions:

1) The taxpayer is NOT a Canadian-controlled private corporation (CCPC) for income tax purposes.
2) The assumed relevant tax rates and tax credit rates are shown in a table below.
3) The taxpayer is assumed to be resident in the province to which it applies for a provincial tax incentive.
4) The university is located in the province in which the taxpayer is resident.
5) The full contract fees qualify for the 20% federal ITC.

	LOCATION									
	British Columbia	**Alberta**	**Saskatchewan** (See Note 1)	**Manitoba** (See Note 2)	**Ontario** (See Note 3)	**Quebec** (See Note 4)	**New Brunswick** (See Note 5)	**Nova Scotia** (See Note 6)	**Prince Edward Island**	**Newfound-land** (See Note 7)
Pre-tax contract payment	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Tax Credits										
Federal ITC	20.00	20.00	17.00	17.00	16.00	13.60	18.00	17.00	20.00	17.00
Provincial tax credits	0.00	0.00	15.00	15.00	20.00	32.00	10.00	15.00	0.00	15.00
Other Tax Savings										
Value of federal deduction of R&D expenses	23.30	23.30	19.80	19.80	18.64	15.84	20.97	19.80	23.30	19.80
Value of provincial deduction of R&D expenses	13.20	12.40	11.56	11.56	9.92	7.91	12.24	10.88	12.80	9.52
Value of Ontario R&D Superallowance					2.79					
Total tax benefit	**56.50**	**55.70**	**63.36**	**63.36**	**67.35**	**69.35**	**61.21**	**62.68**	**56.10**	**61.32**
After tax cost of contract payment	**43.50**	**44.30**	**36.64**	**36.64**	**32.65**	**30.65**	**38.79**	**37.32**	**43.90**	**38.68**

Tax Rate & Tax Credit Rate Table

	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfound-land
Can. federal tax rate	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%
Provincial tax rate	16.50%	15.50%	17.00%	17.00%	15.50%	9.15%	17.00%	16.00%	16.00%	14.00%
Federal tax credit rate	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Provincial tax credit rate	N/A	N/A	15%	15%	20%	40%	10%	15%	N/A	15%

Ontario R&D Superallowance Calculations

R&D expense	100	Super-allowance low rate	25%	
Federal ITC	16	Super-allowance high rate	37.50%	
Ontario tax credits	20			
R&D Expenses net of federal & Ontario tax credits	64			
Base amount	75% of R&D expenses	48		
R&D Superallowance	18			

Notes:

1) The full contract fees qualify for the proposed 15% non-refundable Saskatchewan tax credit announced in the 1998 Saskatchewan Budget.

2) The full contract fees qualify for the 15% non-refundable Manitoba tax credit.

3) The full contract fees qualify for the 20% Ontario Business-Research Institute Tax Credit (OBRI Tax Credit) and a favourable advance ruling is obtained from Ontario Ministry of Finance.
25% of the contract fees (after netting of federal ITC and Ontario tax credits) qualifies for the 37.5% R&D superallowance.

4) The contract payment qualifie for the 40% Quebec tax credit for university research contracts and a favourable advance ruling is obtained from Revenue Quebec. The Quebec rules provide that 80% of the payment qualifies for the credit. Therefore, the credit is effectively 32%.

5) The full contract fees qualify for the 10% non-refundable New Brunswick tax credit.

6) The full contract fees qualify for the 15% Nova Scotia tax credit.

7) The full contract fees qualify for the 15% refundable Newfoundland R&D tax credit.

After-tax cost of Research in Universities - Scenario 2) CCPC - High Income Tax Rates

General assumptions:

1) The taxpayer is a Canadian-controlled private corporation (CCPC) for income tax purposes.
2) There may be limitations on the amount of expenditures eligible for various tax credits (federal, provincial/state). For this illustration, it is assumed that the total expenditures for a year have not exceeded the relevant limit which would otherwise cause a reduction or complete denial of tax credits earned on the contract fees shown below.
3) The taxpayer is not associated with any other companies for Canadian tax purposes.
4) The assumed relevant tax rates and tax credit rates are shown in a table below.
5) The taxpayer is assumed to be resident in the province to which it applies for a provincial tax incentive.
6) The university is located in the province in which the taxpayer is resident.
7) The taxpayer's taxable income in the previous year was $200,000 or less & its taxable capital for Large Capital Tax (Part I.3 tax) for the previous year was less than $10 million.
8) The full contract fees qualify for the 35% federal ITC.

	LOCATION									
	British Columbia	**Alberta**	**Saskatchewan (See Note 1)**	**Manitoba (See Note 2)**	**Ontario (See Note 3)**	**Quebec (See Note 4)**	**New Brunswick (See Note 5)**	**Nova Scotia (See Note 6)**	**Prince Edward Island**	**Newfound-land (See Note 7)**
Pre-tax contract payment	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Tax Credits										
Federal ITC	35.00	35.00	29.75	29.75	24.50	23.80	31.50	29.75	35.00	29.75
Provincial tax credits	0.00	0.00	15.00	15.00	30.00	32.00	10.00	15.00	0.00	15.00
Other Tax Savings										
Value of federal deduction of R&D expenses	18.93	18.93	16.09	16.09	13.25	12.87	17.04	16.09	18.93	16.09
Value of provincial deduction of R&D expenses	10.73	10.08	9.39	9.39	7.05	6.97	9.95	8.84	10.40	7.74
Value of Ontario R&D Superallowance					2.78					
Total tax benefit	**64.66**	**64.01**	**70.23**	**70.23**	**77.58**	**75.64**	**68.49**	**69.68**	**64.33**	**68.58**
After tax cost of contract payment	**35.34**	**35.99**	**29.77**	**29.77**	**22.42**	**24.36**	**31.51**	**30.32**	**35.67**	**31.42**

Tax Rate & Tax Credit Rate Table

	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfound-land
Can. federal tax rate	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%	29.12%
Provincial tax rate	16.50%	15.50%	17.00%	17.00%	15.50%	9.15%	17.00%	16.00%	16.00%	14.00%
Federal tax credit rate	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Provincial tax credit rate	N/A	N/A	15%	15%	30%	40%	10%	15%	N/A	15%

Ontario R&D Superallowance Calculations

R&D expense		100	Super-allowance low rate	35%
Federal ITC		24.5	Super-allowance high rate	52.50%
Ontario tax credits		30		
R&D Expenses net of federal & Ontario tax credits		45.5		
Base amount	75% of R&D expenses	34.125		
R&D Superallowance		17.92		

Notes:

1) The full contract fees qualify for the proposed 15% non-refundable Saskatchewan tax credit announced in the 1998 Saskatchewan Budget.

2) The full contract fees qualify for the 15% non-refundable Manitoba tax credit.

3) The full contract fees qualify for the 10% Ontario Innovation Tax Credit (OITC) and the 20% Ontario Business-Research Institute Tax Credit (OBRI Tax Credit) and a favourable advance ruling is obtained from Ontario Ministry of Finance.
25% of the contract fees (after netting of federal ITC and Ontario tax credits) qualifies for the 52.5% R&D superallowance.

4) The contract payment qualifie for the 40% Quebec tax credit for university research contracts and a favourable advance ruling is obtained from Revenue Quebec. The Quebec rules provide that 80% of the payment qualifies for the credit. Therefore, the credit is effectively 32%.

5) The full contract fees qualify for the 10% non-refundable New Brunswick tax credit

6) The full contract fees qualify for the 15% Nova Scotia tax credit.

7) The full contract fees qualify for the 15% refundable Newfoundland R&D tax credit.

After-tax cost of Research in Universities - Scenario 3) CCPC - Low Income Tax Rates

19-Jun-98

General assumptions:

1) The taxpayer is a Canadian-controlled private corporation (CCPC) for income tax purposes.
2) There may be limitations on the amount of expenditures eligible for various tax credits (federal, provincial/state). For this illustration, it is assumed that the total expenditures for a year have not exceeded the relevant limit which would otherwise cause a reduction or complete denial of tax credits earned on the contract fees shown below.
3) The taxpayer is not associated with any other companies for Canadian tax purposes.
4) The assumed relevant tax rates and tax credit rates are shown in a table below.
5) The taxpayer is assumed to be resident in the province to which it applies for a provincial tax incentive.
6) The university is located in the province in which the taxpayer is resident.
7) The taxpayer's taxable income in the previous year was $200,000 or less & its taxable capital for Large Capital Tax (Part I.3 tax) for the previous year was less than $10 million.
8) The full contract fees qualify for the 35% federal ITC.

	LOCATION									
	British Columbia	**Alberta**	**Saskatchewan (See Note 1)**	**Manitoba (See Note 2)**	**Ontario (See Note 3)**	**Quebec (See Note 4)**	**New Brunswick (See Note 5)**	**Nova Scotia (See Note 6)**	**Prince Edward Island**	**Newfound-land (See Note 7)**
Pre-tax contract payment	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Tax Credits										
Federal ITC	35.00	35.00	29.75	29.75	24.50	23.80	31.50	29.75	35.00	29.75
Provincial tax credits	0.00	0.00	15.00	15.00	30.00	32.00	10.00	15.00	0.00	15.00
Other Tax Savings										
Value of federal deduction of R&D expenses	8.53	8.53	7.25	7.25	5.97	5.80	7.68	7.25	8.53	7.25
Value of provincial deduction of R&D expenses	5.85	3.90	4.42	4.97	4.32	4.50	4.10	2.76	4.88	2.76
Value of Ontario R&D Superallowance					1.70					
Total tax benefit	**49.38**	**47.43**	**56.42**	**56.97**	**66.49**	**66.10**	**53.28**	**54.76**	**48.41**	**54.76**
After tax cost of contract payment	**50.62**	**52.57**	**43.58**	**43.03**	**33.51**	**33.90**	**46.72**	**45.24**	**51.59**	**45.24**

Tax Rate & Tax Credit Rate Table

	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Prince Edward Island	Newfound-land
Can. federal tax rate	13.12%	13.12%	13.12%	13.12%	13.12%	13.12%	13.12%	13.12%	13.12%	13.12%
Provincial tax rate	9.00%	6.00%	8.00%	9.00%	9.50%	5.91%	7.00%	5.00%	7.50%	5.00%
Federal tax credit rate	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Provincial tax credit rate	N/A	N/A	15%	15%	30%	40%	10%	15%	N/A	15%

Ontario R&D Superallowance Calculations

R&D expense		100	Super-allowance low rate	35%
Federal ITC		24.5	Super-allowance high rate	52.50%
Ontario tax credits		30		
R&D Expenses net of federal & Ontario tax credits		45.5		
Base amount	75% of R&D expenses	34.125		
R&D Superallowance		17.92		

Notes:

1) The full contract fees qualify for the proposed 15% non-refundable Saskatchewan tax credit announced in the 1998 Saskatchewan Budget.

2) The full contract fees qualify for the 15% non-refundable Manitoba tax credit.

3) The full contract fees qualify for the 10% Ontario Innovation Tax Credit (OITC) and the 20% Ontario Business-Research Institute Tax Credit (OBRI Tax Credit) and an favourable advance ruling is obtained from Ontario Ministry of Finance.
25% of the contract fees (after netting of federal ITC and Ontario tax credits) qualifies for the 52.5% R&D superallowance.

4) The contract payment qualifie for the 40% Quebec tax credit for university research contracts and a favourable advance ruling is obtained from Revenue Quebec. The Quebec rules provide that 80% of the payment qualifies for the credit. Therefore, the credit is effectively 32%.

5) The full contract fees qualify for the 10% non-refundable New Brunswick tax credit.

6) The full contract fees qualify for the 15% Nova Scotia tax credit.

7) The full contract fees qualify for the 15% refundable Newfoundland R&D tax credit.

APPENDIX D:

Revenue Canada s
Interpretation Bulletin
IT-151R4

Archived

Notice to the reader:

This publication is archived and kept for historical purposes. Use caution when you refer to it, since it reflects the law in force at the time it was released.

Scientific research and experimental development expenditures [after December 15, 1987]

NO: **IT-151R4**

DATE: August 16, 1993

SUBJECT: INCOME TAX ACT
Scientific Research and Experimental Development Expenditures

REFERENCE:
Section 37 (also sections 13, 37.1, 87, 96, 110, 110.1, 118.1, 125, 127, 127.1, 149, and 194; subsections 11(2), 18(9), 88(1), 111(1), 248(1), 249(4); paragraphs 12(1)(v), 12(1)(x), 251(5)(b) of the Income Tax Act and sections 2900, 2901, 2902, 2903 and 4606 and paragraph 1102(1)(d) of the Income Tax Regulations).

Application

The comments in this bulletin generally apply to expenditures on scientific research and experimental development incurred after December 15, 1987. IT-151R3 will continue to apply, subject to certain transitional provisions, to those expenditures incurred before December 16, 1987.

Generally, this bulletin does not reflect the proposed amendments to the Income Tax Act and Regulations announced by the Department of Finance on December 2, 1992. However, the positions set out in paragraphs 17 to 20 of the bulletin are based on certain of the proposed amendments to the Income Tax Regulations that are effective for taxation years ending after 1989.

Summary

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This bulletin deals with the incentives available to taxpayers performing scientific research and experimental development (SR&ED). It discusses the mechanism by which expenditures of a current and capital nature on SR&ED carried on in Canada may be pooled and deducted in calculating the income from a business carried on by a taxpayer in the year the expenditure is made or in any subsequent year. It deals with the provisions that may restrict a corporation's ability to claim any portion of the pool of expenditures on SR&ED following an acquisition of the corporation's control. The deductibility of expenditures for SR&ED carried on outside Canada is also addressed.

The bulletin describes the investment tax credit provisions of the Act that allow a SR&ED performer to reduce its Part I tax payable and discusses the expenditures on SR&ED carried on in Canada that qualify for an investment tax credit.

The bulletin also explains the general basis of calculating the amount of investment tax credits. It discusses the enhanced investment tax credit available to certain Canadian controlled private corporations (CCPCs) for some of their qualified expenditures on SR&ED and it discusses the requirements a CCPC must meet to qualify for the enhanced investment tax credit.

The bulletin addresses the mechanism by which certain taxpayers may obtain a partial refund of the unused portion of the investment tax credits earned during the year and the conditions under which certain CCPCs may be refunded the full amount of the unused portion of the current year's investment tax credit for current expenditures on SR&ED.

Also, the bulletin addresses the consequences an amalgamation or a winding up may have on a SR&ED performer's pool of SR&ED expenditures and amount of investment tax credits. It discusses the particular consequences to a partnership incurring SR&ED expenditures and earning investment tax credits for the qualifying SR&ED expenditures.

Discussion and Interpretation

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1. The topics of this bulletin are discussed under the following headings:

- **INTRODUCTION**
  - **Definition of Scientific Research and Experimental Development** (¶ 2)
  - **General Discussion of Conditions to Deduct** (¶ 3)
  - **Taxation Year** (¶ 4)
  - **Calculation of Expenditure Pool** (¶ 5)
- **GENERAL REQUIREMENTS**
  - **General** (¶ 6)
  - **Carrying on a Business** (¶ 7)
  - **Related to a Business** (¶ 8)
  - **Business Carried on by a Related Corporation** (¶ 9)
  - **Payments to be Used for SR&ED** (¶ 10)
  - **Approval of Minister** (¶ 11)
  - **Entitlement to Exploit the Results** (¶ 12)
  - **Payments for Basic or Applied Research** (¶ 13)
- **SR&ED CARRIED ON IN CANADA**
  - **Expenditures for SR&ED Carried on in Canada** (¶ 14)
  - **Current Expenditures** (¶s 15-25)
    - **General** (¶s 15-16)
    - **Expenditures directly attributable to SR&ED** (¶s 17-20)
    - **Rental expense and payments enabling the recipient to acquire a building or leasehold interest** (¶s 21-22)
    - **Expenditures to acquire rights arising out of SR&ED** (¶ 23)
    - **Interest expense** (¶ 24)
    - **Donations as SR&ED** (¶ 25)
  - **Capital Expenditures** (¶s 26-30)
    - **Depreciable property related to a business** (¶ 26)
    - **Property available for use** (¶ 27)
    - **Separate prescribed class** (¶ 28)
    - **All or substantially all attributable to SR&ED** (¶ 29)
    - **Buildings** (¶ 30)
  - **Projects Resulting in the Acquisition of Property** (¶ 31)
  - **Assistance for SR&ED** (¶s 32-34)

- Receipt and repayment of assistance (¶ 32)
- Government and non-government assistance (¶ 33)
- Interest-free loans (¶ 34)

- Effect of Investment Tax Credit (¶ 35)
- Expenditures Renounced for the Purposes of Part VIII Tax (¶ 36)
- Acquisition of Control (¶ 37)

- SR&ED OUTSIDE CANADA
  - General (¶ 38)
  - Foreign Activities in Support of SR&ED (¶ 39)
  - Expenditures for SR&ED Carried on Outside Canada (¶ 40)
- RECAPTURE OF SR&ED ALLOWANCE
  - General (¶s 41-42)
  - Research Property (¶ 43)
- INVESTMENT TAX CREDITS
  - General (¶s 44-45)
  - Qualified Expenditures (¶ 46)
  - Prescribed Expenditures (¶s 47-55)
    - Current expenditures (¶s 47-48)
    - Sole purpose SR&ED performer (¶s 49-52)
    - Capital expenditures (¶ 53)
    - Other prescribed expenditures (¶s 54-55)
  - Government Assistance, Non-government Assistance and Contract Payments (¶s 56-58)
  - Acquisition of Control (¶ 59)
  - Rates (¶s 60-63)
    - Specified percentage (¶ 60)
    - Additional amount for certain corporations (¶ 61)
    - Short taxation year (¶ 62)
    - Repayments of assistance (¶ 63)
  - Refundable Investment Tax Credits (¶s 64-67)
    - General (¶s 64-65)
    - Qualifying corporation and excluded corporation (¶ 66)
    - Reduction of available investment tax credits (¶ 67)
- AMALGAMATION AND WINDING-UP
  - Continuation of Predecessor Corporations (¶ 68)
  - Capital Cost of Research Property (¶ 69)
  - Availability of Investment Tax Credits (¶ 70)
- PARTNERSHIPS
  - SR&ED Expenditures (¶s 71-72)
  - Allocation of Investment Tax Credits (¶s 73-76)

INTRODUCTION

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Definition of Scientific Research and Experimental Development

2. For the purposes of section 37, Scientific Research and Experimental Development (SR&ED) is defined by paragraph 37(7)(b) to have the meaning given by regulation. Under subsection 2900(1) of the Income Tax Regulations, SR&ED means systematic investigation or search carried out in a field of science or technology by means of experiment or analysis. According to subsection 2900(1) of the Regulations the following constitutes SR&ED:

> (a) basic research, namely, work undertaken for the advancement of scientific knowledge without a specific practical application in view; (b) applied research, namely, work undertaken for the advancement of scientific knowledge with a specific practical application in view; or (c) development, namely, use of the results of basic or applied research for the purpose of creating new, or improved existing materials, devices, products or processes.

Where the following activities are undertaken directly in support of basic or applied research or eligible development activities, SR&ED includes engineering or design, operations research, mathematical analysis or computer programming and psychological research. However, SR&ED does not include the following activities:

- market research or sales promotion;
- quality control or routine testing of materials, devices or products;
- research in the social sciences or the humanities;
- prospecting, exploring or drilling for or producing minerals, petroleum or natural gas;
- the commercial production of a new or improved material, device or product or the commercial use of a new or improved process;
- style changes; and
- routine data collection.

Technical guidelines that reflect the Department's interpretation of these provisions of the Act and Regulations are discussed in the current version of Information Circular 86-4, Scientific Research and Experimental Development.

General Discussion of Conditions to Deduct

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3. Generally, section 37 provides that a taxpayer carrying on a business in Canada in a taxation year may deduct in calculating income from the business for the year current and capital expenditures for SR&ED carried on in Canada that relate to a business of the taxpayer. A taxpayer who has made SR&ED expenditures in a year in respect of a particular business, may, to the extent that those expenditures have not been deducted in the year, deduct those expenditures in any subsequent year in calculating income from that or any other business carried on by the taxpayer in the subsequent year (subject to certain limits, as discussed in 37 below, if the taxpayer is a corporation whose control has been acquired by a person or group of persons). In addition, a taxpayer may deduct a current expenditure incurred in carrying on SR&ED outside Canada in the year the expenditure was made (see 38-40 below).

Taxation Year

4. References in subsection 37(1) to a "year" are generally references to a taxation year. However, in the case of an individual (other than a testamentary trust) who carries on an unincorporated business which has a fiscal year-end other than December 31, subsection 11(2) provides that the reference to a "year" relates to a fiscal period of the business ending in the year.

Calculation of Expenditure Pool

5. Subsection 37(1) provides for the calculation of a taxpayer's expenditure pool for SR&ED carried on in Canada. In general, the pool is increased by the amount of current and capital expenditures on SR&ED carried on in Canada, the amount of repayments of government and non- government assistance that had previously reduced the pool and the amounts that have been included in the taxpayer's income for a previous year under paragraph 12(1)(v). The taxpayer's pool is decreased by the amount of government and non-government assistance that the taxpayer has received, is entitled to receive or can reasonably be expected to receive for SR&ED expenditures, amounts claimed as investment tax credits in a preceding year that may reasonably be attributed to SR&ED expenditures of a current nature, and amounts deducted under subsection 37(1) in previous years (except amounts described in subsection 37(6) as discussed in 28 below). If the pool has a positive balance at the end of the year, the amount a taxpayer may deduct for that year under subsection 37(1) cannot be more than the balance in the pool. If the pool has a negative balance at the end of a year, paragraph 12(1)(v) provides that the

negative balance must be included in the taxpayer's income for the year. Various other transactions, as described in 36 and 37 below, may also increase or decrease the taxpayer's expenditure pool.

GENERAL REQUIREMENTS

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General

6. In order to claim a deduction under subsection 37(1) in a taxation year, a taxpayer must satisfy certain requirements. The taxpayer must carry on a business in Canada in the year and must file with his return of income for the year form T661, Claim for Scientific Research and Experimental Development Expenditures Carried On in Canada.

Carrying on a Business

7. Whether a taxpayer is carrying on a business is a question of fact that must be determined on a case-by-case basis. In the case of a start-up operation, refer to the current version of IT-364, Commencement of Business Operations, which sets out factors to consider in determining whether a taxpayer has begun to carry on a business in Canada.

Related to a Business

8. Subparagraph 37(1)(a)(i) specifies that an expenditure of a current nature made by a taxpayer on SR&ED carried on in Canada, that is directly undertaken by or on behalf of the taxpayer, must also be related to a business of the taxpayer. Whether an expenditure on SR&ED is related to a taxpayer's business is generally a question of fact that must be determined on a case-by-case basis. Paragraph 37(7)(d) provides, for greater certainty, that references to SR&ED related to a business include any SR&ED that may lead to, or facilitate, an extension of that business. For SR&ED to be related to a business carried on by a taxpayer, it is necessary to have some interconnection or link between the SR&ED activities and the taxpayer's business. This requirement will generally be satisfied when the results of the SR&ED, if successful, have a direct and beneficial application in the business that is carried on by the taxpayer. Paragraph 37(7)(e) provides that the prosecution of SR&ED, in and by itself, is only considered a business of the taxpayer to which the SR&ED relates if the taxpayer derives all or substantially all of its revenue from the prosecution of SR&ED. For this purpose, a taxpayer deriving 90% or more of its revenue from the prosecution of SR&ED is considered to derive "all or substantially all" of its revenue from the prosecution of SR&ED. Revenue from the prosecution of SR&ED includes revenue from the sale of rights in or arising out of SR&ED carried on by the taxpayer (see 51 below). In regard to the application of paragraph 37(7)(e), please refer to the Act for certain transitional rules that may apply to SR&ED expenditures made after December 15, 1987.

Business Carried on by a Related Corporation

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9. Subsection 37(1.1) provides that (notwithstanding paragraph 37(7)(e)) for the purposes of subsection 37(1), where a corporate taxpayer performs SR&ED that is related to a business actively carried on by another corporation that is related to the taxpayer at the time the taxpayer makes an expenditure or payment for SR&ED, the SR&ED is considered to be related to a business of the taxpayer. Thus, for example, if the taxpayer performing SR&ED is a wholly-owned subsidiary of another corporation, the subsidiary's SR&ED will be considered to be "related to a business of the taxpayer" if the SR&ED is related to a business carried on by the parent. The parent must be actively engaged in the business at the time the subsidiary makes the expenditures on SR&ED. In determining whether two corporations are related for the purposes of

subsection 37(1.1), the determination is to be made without reference to a right referred to in paragraph 251(5)(b).

Payments to be Used for SR&ED

10. Payments to be used for SR&ED (other than those described in 22 below) that are made to corporations resident in Canada and to certain approved entities described in subparagraph 37(1)(a)(ii) may be included in the calculation of the expenditure pool under subsection 37(1). Payments to these organizations will qualify only if they are to be used for SR&ED carried on in Canada related to a business of the taxpayer and if the taxpayer making the payment is entitled to exploit the results of the SR&ED.

Approval of Minister

11. The term "approved" as used in section 37 and defined in paragraph 37(7)(a) refers only to the approval, by the Minister, of associations or other organizations. It does not refer to the approval of SR&ED programs. To determine whether an institution or association has been approved by the Minister for purposes of section 37, the taxpayer should contact the organization in question. For the purposes of clause 37(1)(a)(ii)(B), all Canadian universities and affiliated colleges are considered to be approved. An "approved organization", for the purposes of clause 37(1)(a)(ii)(E), will include the Natural Sciences and Engineering Research Council, the Medical Research Council and the Social Sciences and Humanities Research Council. To apply for "approved" status an institution or association should send its application to the Director General, Rulings Directorate, Legislative and Intergovernmental Affairs Branch, Revenue Canada - Customs, Excise and Taxation, 88 Metcalfe Street, Ottawa, Ontario, K1A OL8.

Entitlement to Exploit the Results

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12. The determination of whether a taxpayer is "entitled to exploit the results" of SR&ED is a question of fact that can only be determined on a case-by-case basis. For example, this requirement is considered to be met in cases where the taxpayer has the right to use a patent that results from the SR&ED project even if the taxpayer is charged a royalty or similar fee for the use of the patent. This requirement is also considered to be met in cases where the taxpayer is entitled to distribute and market any product that results from the SR&ED project. In addition, where a taxpayer makes a payment for SR&ED to an approved university or other entity described in subparagraph 37(1)(a)(ii) and it is likely that the SR&ED project will not result in a product or patent, the taxpayer will be considered to have met this requirement if it can be established that the taxpayer has, as a consequence of the payment, been granted a preferential right to use the results of the SR&ED in its business. However, an arrangement involving payments to an entity described in subparagraph 37(1)(a)(ii) by a taxpayer who owns shares of a corporation which will exploit the results of an SR&ED project does not meet this requirement because it is the taxpayer making the payment who must be entitled to exploit the results of the SR&ED. In regard to the application of the requirement that the taxpayer be entitled to exploit the results of the SR&ED, please refer to the Act for certain transitional rules that may apply to payments made after December 15, 1987 and before 1989.

Payments for Basic or Applied Research

13. Under certain circumstances, subparagraph 37(1)(a)(iii) permits a corporation to include in its pool of SR&ED expenditures a payment made to a corporation that is resident in Canada and exempt from tax under paragraph 149(1)(j). To be included in the SR&ED expenditure pool under this subparagraph the payment must be for SR&ED that is basic or applied

research carried on in Canada. The primary purpose of the payment for SR&ED must be for the taxpayer to use the results from the basic or applied research in conjunction with other SR&ED activities directly undertaken by or on behalf of the taxpayer that relate to the taxpayer's business. Furthermore, the basic or applied research must have technological potential for application in other types of businesses that are not related to the business carried on by the paying corporation.

SR&ED CARRIED ON IN CANADA

Expenditures for SR&ED Carried on in Canada

14. Subparagraph 37(7)(c)(ii) provides that references in section 37 (other than in subsection 37(2) (see 40 below)) to expenditures on or in respect of SR&ED in Canada include only:

> (a) expenditures of a current or capital nature incurred for and all or substantially all of which were attributable to the prosecution, or to the provision of premises, facilities or equipment for the prosecution, of SR&ED in Canada; or
>
> (b) expenditures of a current nature that were directly attributable to the prosecution of SR&ED in Canada (as determined by subsection 2900(2) of the Regulations), or expenditures of a current nature that were directly attributable to the provision of premises, facilities or equipment for the prosecution of SR&ED in Canada (as determined by subsection 2900(3) of the Regulations).

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A current expenditure that is intended to be used 90% or more for SR&ED purposes at the time it is made and that is actually used in that manner will be considered to be "incurred for and all or substantially all attributable" to the prosecution of SR&ED, or to the provision of premises, facilities or equipment for the prosecution of SR&ED, as the case may be. For example, the wages of an employee hired for SR&ED purposes are considered all or substantially all attributable to the prosecution of SR&ED if 90% or more of this employee's time is devoted to the prosecution of SR&ED. The meaning of the expression "incurred for and all or substantially all attributable to" as it relates to capital expenditures is discussed in 29 below.

Current Expenditures

General

15. Current expenditures on SR&ED carried on in Canada may be included in the pool of SR&ED expenditures under paragraph 37(1)(a). Such expenditures may then be deducted in calculating income in the year, or in any subsequent year, subject to the overall limitations of subsection 37(1). While all expenditures on SR&ED may be considered expenditures of a capital nature, for the purposes of section 37, current expenditures on SR&ED are considered to be those expenditures that do not result in the acquisition of land, a leasehold interest in land, or property that would otherwise be depreciable property to the taxpayer.

16. To determine when current expenditures qualify for inclusion in the pool of SR&ED expenditures, the following guidelines apply. Where a taxpayer carries on SR&ED in Canada with the taxpayer's own staff, or contracts with another person to have such SR&ED directly undertaken on the taxpayer's behalf, current expenditures fall under subparagraph 37(1)(a)(i) and normal "accrual" accounting principles apply. For example, if a liability is incurred for materials that are later used in SR&ED, the cost of these materials is considered to be an

expenditure on SR&ED in the year in which they are consumed in a qualifying activity, even though payment for them is made in a different year. Also, where an expenditure relates to a contract for services to be performed, such an amount will normally be included in the SR&ED expenditure pool under subparagraph 37(1)(a)(i). When the services are not performed before the end of the taxpayer's taxation year, subsection 18(9) will apply to deny the deduction until the taxation year in which the services are actually performed.

Expenditures directly attributable to SR&ED

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17. For the purposes of clause 37(7)(c)(ii)(B), subsection 2900(2) of the Regulations describes the expenditures that are considered to be directly attributable to the prosecution of SR&ED. Paragraph 2900(2)(a) of the Regulations provides that a current expenditure is directly attributable to the prosecution of SR&ED if it is the cost of materials consumed in such prosecution. Paragraph 2900(2)(b) provides that certain expenditures for employee remuneration are directly attributable to the prosecution of SR&ED. These expenditures are considered to include the portion of salaries, wages or related benefits incurred for an employee who directly undertakes, supervises or supports the prosecution of SR&ED to the extent the amount incurred can reasonably be considered to relate to such prosecution.

18. Paragraph 2900(2)(c) of the Regulations provides that certain other expenditures are also directly attributable to the prosecution of SR&ED. These other expenditures are considered to include any expenditure, or portion thereof, other than an expenditure referred to in paragraph 2900(2)(a) or (b) (see 17 above), that is directly related to the prosecution of SR&ED and that would not have been incurred if such prosecution had not occurred. For example, the portion of general and administrative expenses, such as the relevant portion of expenditures for training employees or for personnel or accounting staff, that is directly related to the prosecution of SR&ED and that would not have otherwise been incurred is considered to be directly attributable to the prosecution of SR&ED. Also, a portion of certain overhead expenses, such as the cost of light, heat and long distance telephone charges, is generally considered to be directly attributable to the prosecution of SR&ED if it can be established that such portion otherwise meets the requirements of paragraph 2900(2)(c). The portion of factory overheads or general and administrative expenses that does not meet the requirements of paragraph 2900(2)(c) may be included in the pool of SR&ED expenditures to the extent that it relates to the provision of premises, facilities or equipment for the prosecution of SR&ED carried on in Canada and otherwise meets the requirements of subsection 2900(3) of the Regulations as discussed in 19 below.

19. For the purposes of clause 37(7)(c)(ii)(B), subsection 2900(3) of the Regulations describes the expenditures that are considered to be directly attributable to the provision of premises, facilities or equipment for the prosecution of SR&ED in Canada. Paragraph 2900(3)(a) of the Regulations provides that the cost of the maintenance and upkeep of premises, facilities or equipment provided for SR&ED in Canada is directly attributable to the provision of such premises, facilities or equipment. Paragraph 2900(3)(b) provides that certain other expenditures are also directly attributable to the provision of premises, facilities or equipment for the prosecution of SR&ED carried on in Canada. These other expenditures are considered to include any expenditure, or portion thereof, that is directly related to the provision of premises, facilities or equipment for the prosecution of SR&ED in Canada and that would not have been incurred if these premises, facilities or equipment had not existed. For example, under this paragraph, if a building is used for the prosecution of SR&ED, a reasonable portion of the municipal taxes or the cost of insurance for the building is considered to be directly attributable to the SR&ED. In such cases, the method used to determine the portion of the municipal taxes that is directly related to this use must also be reasonable and

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may, for example, be based on the square meters of the building used for SR&ED over the total square meters of the building. Other methods can be used to determine the portion of an expenditure that is directly related to the provision of premises, facilities or equipment for the prosecution of SR&ED provided they are reasonable in the circumstances. In all cases, whichever method is used, the taxpayer must be able to support that it is reasonable.

20. Under subsection 2900(4) of the Regulations the references to an expenditure for the purposes of subsections 2900(2) and (3) of the Regulations are considered not to include a bonus, or remuneration based on profits, that is incurred in respect of a person who does not deal at arm's length with the payor or who is a "specified shareholder" of the payor. The term "specified shareholder" is defined in subsection 248(1). It includes a taxpayer who at any time in the year owns, directly or indirectly, 10% or more of the issued shares of any class of the capital stock of the payor or of any other corporation that is related to the payor. Thus, for example, if a corporation pays or accrues a bonus to its sole shareholder, the bonus is not directly attributable to the prosecution of SR&ED. However, a bonus paid or payable by the same corporation to an employee who is dealing at arm's length with the corporation and is not a specified shareholder of the corporation will not be prevented by subsection 2900(4) from being directly attributable to the prosecution of SR&ED.

Rental expense and payments enabling the recipient to acquire a building or leasehold interest

21. Rental expenses incurred after 1987 in respect of a building (other than a prescribed special-purpose building (see 30 below)) generally do not constitute expenditures on SR&ED under subparagraph 37(7)(f)(ii). However, rental expenses are excepted from this rule if they were incurred under a written lease agreement that was renewed, extended or entered into before June 18, 1987 by the taxpayer or a person with whom the taxpayer did not deal at arm's length at the time the lease was renewed, extended or entered into.

22. Subparagraph 37(7)(f)(iii) provides that payments made by a taxpayer to an approved research institute or an approved association, which does not deal at arm's length with the taxpayer or to a corporation (other than a resident Canadian corporation that is tax- exempt under paragraph 149(1)(j) and is dealing at arm's length with the taxpayer), do not constitute SR&ED expenditures to the extent that they may reasonably be considered to have been made to enable the recipient to acquire a building or a leasehold interest in a building or to pay an amount in respect of the rental expense for a building. A payment made by a taxpayer to an approved university, college or organization does not constitute an expenditure on SR&ED to the extent that the amount of the payment may reasonably be considered to have been made to enable the recipient to acquire a building, or a leasehold interest in a building in which the taxpayer has, or may reasonably be expected to acquire, an interest. Subparagraph 37(7)(f)(iii) applies to payments made after December 15, 1987 other than payments made under the terms of a written agreement entered into before December 16, 1987 with a person with which the taxpayer deals at arm's length.

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Expenditures to acquire rights arising out of SR&ED

23. Subsection 37(4) provides that no deduction may be made under section 37 in respect of an expenditure to acquire rights in, or arising out of, SR&ED. As a result, expenditures made by a taxpayer to purchase or entitle the taxpayer to use the results of an SR&ED program in which the taxpayer did not participate may not be included in the pool of SR&ED expenditures. Subsection 37(4) will apply to deny a deduction for a royalty or other similar payment for products or processes that will have use beyond the SR&ED stage (i.e., which

become part of a marketed product). Subsection 37(4) will generally not apply to deny a deduction for an expenditure on something that is merely a tool for performing SR&ED. For example, subsection 37(4) will not apply to deny a deduction for expenditures made to acquire capital property (that may result from the SR&ED efforts of others) required to support the taxpayer's SR&ED efforts but that will not be incorporated into the end product, provided the taxpayer is not acquiring any right to commercially exploit the results of the other party's SR&ED. Expenditures made by a taxpayer to acquire patents or other legal protection related to the results of an SR&ED program are not deductible under section 37 regardless of whether the taxpayer participated in the program.

Interest expense

24. Interest expense incurred on money borrowed for the prosecution of SR&ED is deductible as an SR&ED expenditure only to the extent that the borrowed money is used to make SR&ED expenditures which are otherwise deductible under section 37.

Donations as SR&ED

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25. Where an expenditure that qualifies for a deduction under subsection 37 is otherwise deductible under section 110.1 or 118.1, subsection 37(5) provides that no deduction for that expenditure may be made under section 110.1 or 118.1 in calculating for any taxation year the taxable income of, or the tax payable by, the taxpayer.

Capital Expenditures

Depreciable property related to a business

26. Capital expenditures on SR&ED carried on in Canada may be included in the pool of SR&ED expenditures under paragraph 37(1)(b). Such expenditures may then be deducted in computing income in the year, or in any subsequent year, subject to the overall limitations of subsection 37(1). Under this paragraph capital expenditures are only those expenditures that result in the acquisition of property that would be the taxpayer's depreciable property (other than property referred to in 30 below) if paragraph 37(1)(b) did not apply. Consequently, expenditures for the acquisition of land, property that is described in a taxpayer's inventory or eligible capital property (such as goodwill) may not be included under paragraph 37(1)(b). The comments in the current version of IT-128, Capital Cost Allowance - Depreciable Property, may be of assistance in determining whether a particular property is depreciable property. The amount of these capital expenditures that may be included in the taxpayer's SR&ED expenditure pool for a taxation year is limited to the lesser of:

(a) the total of all capital expenditures made in the year or any previous year ending after 1958 on SR&ED carried on in Canada that is directly undertaken by or on behalf of the taxpayer and that is related to a business of the taxpayer, and

(b) the amount that would be the undepreciated capital cost of the property so acquired as of the end of the taxation year, calculated as if no amount has been deducted in respect of the property under section 37 for the taxation year.

Property available for use

27. Subsection 37(1.2) deems a SR&ED expenditure of a capital nature not to have been made until the property acquired with the expenditure becomes

"available for use" by the taxpayer as determined under subsections 13(26) to 13(32). Generally, subsection 37(1.2) applies to expenditures made after 1989. However, please refer to the Act for certain transitional rules that may apply to certain non-arm's length situations and certain reorganizations.

Separate prescribed class

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28. Paragraph 1102(1)(d) of the Regulations excludes from the classes of property on which capital cost allowance may be claimed property that has been acquired by an expenditure for which the taxpayer is allowed a deduction under section 37. Therefore, a taxpayer is prevented from duplicating claims for capital expenditures by claiming capital cost allowance on such property. In addition, subsection 37(6) provides that, for the purposes of section 13, an amount claimed under subsection 37(1) that may reasonably be considered to be in respect of property described in paragraph 37(1)(b) will be deemed to be an amount that has been allowed to the taxpayer as capital cost allowance. Since subsection 37(6) also deems the property to be of a separate prescribed class, subsection 13(1) may require an amount to be included in the taxpayer's income as recapture of capital cost allowance if the property is disposed of. In calculating the amount that would otherwise be the undepreciated capital cost of the property, the capital cost of the property will be reduced by the amounts that were deducted under subsection 37(1) that may reasonably be considered to be in respect of the property. For taxation years ending after 1987, paragraph 13(7.1)(e) reduces the capital cost of depreciable property and, consequently, the undepreciated capital cost of the property by the amount of any investment tax credit that was deducted in a preceding year for the property. Paragraph 13(7.1)(f) usually reduces the capital cost of depreciable property and, consequently, the undepreciated capital cost of the property by the amount of any assistance the taxpayer has received or is entitled to receive. However, paragraph 13(7.1)(a) provides that, the capital cost and undepreciated capital cost of the property is not reduced by an amount described in paragraph 37(1)(d). Accordingly, in the calculation of the undepreciated capital cost of the property the amount of government or non-government assistance the taxpayer received, is entitled to receive or can reasonably be expected to receive for the acquisition of the property, that would otherwise be depreciable property, used in the taxpayer's SR&ED projects (see 32 below) will not reduce the capital cost of the property. A taxpayer may be required to include an amount in income under subsection 13(1) even though there has not been a disposition of the particular property. For example, this could occur where the taxpayer has claimed a deduction under subsection 37(1) for the entire capital cost of the property and also claims any portion of the investment tax credit for that property.

All or substantially all attributable to SR&ED

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29. Clause 37(7)(c)(ii)(A) provides that capital expenditures for SR&ED include only expenditures that were incurred for and all or substantially all of which were attributable to the prosecution, or the provision of premises, facilities or equipment for the prosecution, of SR&ED in Canada. If the expenditure is for property that is to be used 90% of the time throughout its expected useful life for SR&ED in Canada, it is considered to be an expenditure "incurred for and all or substantially all of which is attributable to the prosecution of SR&ED in Canada." The requirement that the expenditure was incurred for and all or substantially all attributable to SR&ED is also met if 90% of the cost of the property is to be consumed in, or attributable to, the time during which the property is used for SR&ED. Thus, a piece of equipment which is to be used partly for SR&ED and partly for other purposes will meet this requirement if its anticipated use for other purposes does not normally exceed 10% of the time or if at least 90% of the expenditure or cost of the property acquired should normally be attributable to the time in which the particular property is used for SR&ED. The determination of whether a capital expenditure is all or substantially all attributable to SR&ED is usually made at the time the property

is acquired. In making this determination, the intended use of the property in the year in which the expenditure was made as well as over its useful life will be considered. Subsequent use of the property also provides evidence of the taxpayer's intention at the time the expenditure was made. However, where the subsequent use is contrary to the taxpayer's stated intention, the onus is on the taxpayer to support the intention that the cost of the property was to be all or substantially all attributable to SR&ED in Canada. If an existing property is used temporarily for SR&ED, the direct costs (including maintenance and repairs) that would not have been incurred if the SR&ED had not been carried out may be included in the calculation of the SR&ED expenditure pool under paragraph 37(1)(a). No amount of the cost or undepreciated capital cost of that property may be included under paragraph 37(1)(b).

Buildings

30. Generally after 1987, capital expenditures that relate to the acquisition of a building (other than a prescribed special-purpose building) including a leasehold interest in a building, do not constitute expenditures on or in respect of SR&ED under subparagraph 37(7)(f)(i). However, this restriction does not apply if the building or leasehold interest was acquired before 1990 under a written obligation entered into before June 18, 1987, or if the construction of the building was started by or on behalf of the taxpayer before June 18, 1987. Prescribed special-purpose buildings are described in section 2903 of the Regulations. The comments in the current version of IT-79, Capital Cost Allowance - Buildings and Other Structures, may be of assistance in distinguishing between expenditures for the acquisition of buildings and expenditures for the acquisition of other structures.

Projects Resulting in the Acquisition of Property

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31. Certain projects result in the acquisition of property that can reasonably be expected to be used in the taxpayer's business or that will be sold. Projects, such as the development of a custom product, that may involve SR&ED activities may also involve commercial production activities that do not constitute SR&ED under paragraph 2900(1)(h) of the Regulations. To determine the eligible expenditures on SR&ED for such projects, the SR&ED activities and the non-SR&ED activities should be identified and the project costs allocated between these activities. Alternatively, the eligible expenditures on SR&ED for these projects may be determined by "carving- out" the costs that would have been incurred to produce the property if the technology had already existed. Those expenditures remaining after the carve-out are considered to be all or substantially all attributable to the prosecution, or the provision of premises, facilities or equipment for the prosecution, of SR&ED, as the case may be. The carve-out method or procedure is discussed in more detail in the current version of Information Circular 86-4, Scientific Research and Experimental Development. However, where a property is being constructed during a particular project for its experimental or technical content and is not being constructed for commercial use or sale, paragraph 2900(1)(h) is not considered to apply and it is not necessary to allocate the project costs between the SR&ED and the commercial production activities.

Assistance for SR&ED

Receipt and repayment of assistance

32. Paragraph 37(1)(d) deals with the amount of government and non-government assistance (see 33 below) that, at the time of filing the return of income for the year, a taxpayer has received, is entitled to receive or can reasonably be expected to receive for a current or capital expenditure on SR&ED made after April 1988. Under paragraph 37(1)(d), the amount of such assistance decreases the pool of SR&ED expenditures. On the other hand,

paragraph 37(1)(c) provides that any repayment of such assistance increases a taxpayer's expenditure pool in the year of repayment to the extent it had previously reduced the pool.

Government and non-government assistance

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33. "Government assistance" is defined in subsection 127(9). It includes assistance from a government, municipality or other public authority whether as a grant, subsidy, forgivable loan, deduction from tax (other than an investment tax credit claimed under subsection 127(5) or (6)), investment allowance or as any other form of assistance. For example, certain provincial tax credits that are available for taxpayers performing SR&ED that reduce the amount of provincial taxes payable are considered government assistance. However, the Ontario Research and Development Super Allowance is a deduction in the calculation of income for Ontario income tax purposes and is not considered to be government assistance. Subsection 127(9) defines "non- government assistance" as an amount that would be included in the taxpayer's income under paragraph 12(1)(x) (read without reference to subparagraphs (vi) and (vii) thereof). Essentially, non-government assistance is an amount that can reasonably be considered to have been received as an inducement or as a reimbursement, contribution, allowance or as assistance for the cost of property or for an outlay or expense. Such an amount will constitute non-government assistance to the extent it was not otherwise included in calculating the taxpayer's income or deducted in calculating any balance of undeducted outlays, expenses or other amounts for the year or a preceding taxation year. Non-government assistance may be in the form of a grant, subsidy, forgivable loan, deduction from tax, allowance or any other form of inducement or assistance.

Interest-free loans

34. The determination of whether a particular loan will constitute government or non-government assistance depends on the particular facts and circumstances concerning that loan. The fact that a loan is interest-free or is made at a lower than commercial rate of interest will generally not classify the loan as government or non-government assistance.

Effect of Investment Tax Credit

35. For taxation years ending after 1987, the amount of investment tax credit deducted or deemed to be deducted (as discussed in 67 below) by the taxpayer under subsection 127(5) in calculating taxes payable in a preceding year will, to the extent that it may reasonably be considered to relate to a qualified SR&ED expenditure of a current nature made in a preceding taxation year, reduce the taxpayer's pool of SR&ED expenditures under paragraph 37 (1)(e). To the extent that an investment tax credit deducted or refunded may reasonably be considered to relate to a property acquired in a preceding year as a result of a qualified SR&ED expenditure of a capital nature, it will reduce the capital cost of the separate prescribed class of the property acquired (see 28 above) under paragraph 13(7.1)(e). For record-keeping purposes, a taxpayer should, therefore, separate investment tax credits either deducted or available that were earned for SR&ED expenditures from those earned on other qualified property. Furthermore, investment tax credits earned for current expenditures on SR&ED should be separated from those earned on capital expenditures since investment tax credits earned on current expenditures are subject to a different refund rate as discussed in 65 to 67 below.

Expenditures Renounced for the Purposes of Part VIII Tax

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36. Where a corporation issued scientific research and experimental development tax credit securities to investors before 1986, the corporation was

permitted to generate a Part VIII refund if it renounced its entitlement to deduct all or a portion of its SR&ED expenditures and renounced its ability to claim an investment tax credit on these expenditures. Such renounced expenditures reduce the taxpayer's expenditure pool in accordance with the provisions of paragraph 37(1)(g).

Acquisition of Control

37. Paragraph 37(1)(h) and subsection 37(6.1) restrict the carryforward of a corporation's SR&ED expenditures where there has been an acquisition of its control by a person or group of persons at any time before the end of a taxation year. These provisions apply to acquisitions of control occurring after January 15, 1987, other than acquisitions of control occurring before 1988 where the persons acquiring the control were obliged on January 15, 1987 to acquire the control under the terms of a written agreement entered into on or before that date. Generally, these provisions (combined with the application of subsection 249(4), which deems the corporation's year to have ended immediately before the acquisition of control) operate to reduce a corporation's pool of SR&ED expenditures to nil at the time control of the corporation is acquired. Paragraph 37(1)(h) and subsection 37(6.1) provide that, in a subsequent taxation year throughout which the business to which the expenditures relate is carried on by the corporation for profit or with a reasonable expectation of profit, the corporation's pool of SR&ED expenditures may be reinstated. The pool of SR&ED expenditures will be reinstated to the extent of the income (before claiming any deduction under subsection 37(1)) earned by the corporation, after the acquisition of control, from the business to which the expenditures related. In addition, where properties were sold, leased, rented or developed or services were rendered, in the course of carrying on the corporation's business before the acquisition of control, the pool of SR&ED expenditures will be reinstated to the extent of the income for the year (before claiming any deduction under subsection 37(1)) from any other business substantially all the income of which was derived from the sale, leasing, rental or development of similar properties or the rendering of similar services.

SR&ED OUTSIDE CANADA

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General

38. Capital expenditures on SR&ED carried on outside Canada are not deductible under section 37. However, subsection 37(2) provides a deduction for current expenditures on SR&ED carried on outside Canada if it is directly undertaken by or on behalf of the taxpayer and is related to the taxpayer's business. Current expenditures made by payments to an approved association, university, college, research institute or other similar institution to be used for SR&ED carried on outside Canada that is related to the taxpayer's business are also deductible under subsection 37(2) provided that the taxpayer is entitled to exploit the results of such SR&ED. In regard to the application of the requirement that the taxpayer be entitled to exploit the results of the SR&ED, please refer to the Act for certain transitional rules that may apply to expenditures on SR&ED carried on outside Canada made after December 15, 1987 and before 1989. Current expenditures on SR&ED carried on outside Canada cannot be carried forward and must be deducted in the year the expenditure is incurred. The nature and location of the activities will indicate whether SR&ED is carried on inside or outside Canada.

Foreign Activities in Support of SR&ED

39. For the purpose of section 37, an activity such as engineering, computer programming or psychological research that is undertaken directly in support of SR&ED would qualify as SR&ED under subsection 2900(1) of the Regulations. Thus, where a taxpayer performs such an activity outside Canada that is

directly in support of a particular SR&ED project, the related expenditures would only be deductible under subsection 37(2) as SR&ED carried on outside Canada.

Foreign travel expenditures, including salaries or wages and other related benefits of a Canadian employee undertaking foreign travel, and any other expenditures that relate to SR&ED carried on outside Canada may only qualify for a deduction under subsection 37(2). Even if a particular expenditure for SR&ED carried on outside Canada is incurred in Canada or is made through a Canadian subcontractor, or if it represents a minor portion of the project, it will not qualify for a deduction under subsection 37(1). However, expenditures including foreign travel expenditures that are incurred for other activities carried on outside Canada, that are in support of SR&ED carried on in Canada, but do not constitute SR&ED in and by themselves, may be deductible under subsection 37(1) provided the requirements of this subsection are otherwise met and the expenditures meet the requirements of subparagraph 37(7)(c)(ii).

Expenditures for SR&ED Carried on Outside Canada

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40. Subparagraph 37(7)(c)(i) provides that references in subsection 37(2) to expenditures on or in respect of SR&ED carried on outside Canada include only current expenditures that are incurred for and all or substantially all of which are attributable to the prosecution of SR&ED, or current expenditures that are directly attributable (as determined by subsection 2900(2) of the Regulations) to the prosecution of SR&ED. See 14 above for comments on the meaning of "all or substantially all attributable to." The comments relating to subsection 2900(2) of the Regulations discussed in 17 and 18 above are also relevant for the purposes of determining whether expenditures are directly attributable to the prosecution of SR&ED carried on outside Canada as required by clause 37(7)(c)(i)(B).

RECAPTURE OF SR&ED ALLOWANCE

General

41. Although the additional allowance for SR&ED was eliminated in 1983, subsection 37.1(3) still applies to require a corporation that claimed an additional allowance under section 37.1 for a research property to include an amount in income if the research property is disposed of. The recapture to be included in income is equal to the lesser of:

(a) 50% of the lesser of

(i) the fair market value of the property at the time of disposition, and

(ii) the capital cost of the property to the corporation at the time of disposition,

and

(b) the amount, if any, by which the total of the amounts deducted under section 37.1 by the corporation for any taxation year beginning before the disposition and by any associated corporations for taxation years ending in or before the year of disposition exceeds the total of amounts previously included in the corporation's and any associated corporation's income because of this subsection.

42. Where a corporation transfers a research property to an associated corporation in a transaction to which either subsection 85(1) or 88(1) applies,

any recapture is deferred until the property is sold. The transferred property is deemed to be a research property of the associated corporation. If the corporation's proceeds of disposition for the property are less than its capital cost, the recipient's capital cost is deemed to be the same as that of the transferor. The allowance will be immediately recaptured when a rollover under subsection 85(1) is made to a non-associated company.

Research Property

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43. A "research property" is defined by paragraph 37.1(5)(d) to be capital property (described in subparagraph 37.1(5)(c)(ii)) that was acquired as a result of an expenditure made by a corporation after the end of its 1977 taxation year. The property must not have been used for any other purpose whatever before its acquisition and the expenditure must not be an expenditure prescribed in section 2901 of the Regulations.

INVESTMENT TAX CREDIT

General

44. The comments in 45 to 67 below discuss the investment tax credit for qualified expenditures on SR&ED. Comments on the investment tax credits of a taxpayer that is a member of a partnership are contained in 73 to 76 below. Taxpayers should also refer to form T2038, Investment Tax Credit, and to the current version of IT-331, Investment Tax Credits, for more information on investment tax credits.

45. Subsection 127(5) provides for the deduction of a taxpayer's investment tax credit from Part I tax otherwise payable. Subject to an annual investment tax credit limit, defined in subsection 127(9), investment tax credits may be applied to reduce tax in the year the expenditure is made, any of the 3 prior years or any of the 10 subsequent years. Section 127.1 provides that unused investment tax credits of certain taxpayers may be refunded in the year the expenditure is incurred (see 64 to 67 below). A corporation's annual investment tax credit limit is the total of three quarters (3/4) of its Part I tax otherwise payable for the year plus, where the corporation is a CCPC throughout the year, 3% of the least of the amounts determined under paragraphs 125(1)(a) to (c). For an individual, this limit is $24,000 plus three quarters (3/4) of the amount of tax otherwise payable under the Act, in excess of $24,000. Generally, the investment tax credit for expenditures on SR&ED is determined by applying a specified percentage (see 60 below) to the amount of the qualified expenditure incurred in the year.

Qualified Expenditures

46. A "qualified expenditure" is defined in subsection 127(9) and includes both current and capital expenditures on SR&ED carried on in Canada. To be eligible as a qualified expenditure, the expenditure must first qualify as an expenditure on SR&ED that is described in paragraph 37(1)(a) or subparagraph 37(1)(b)(i). However, an expenditure that is deductible under subsection 37(1) may not necessarily be a qualified expenditure for the purpose of the investment tax credit. A qualified expenditure does not include a prescribed expenditure described in section 2902 of the Regulations or an expenditure that has been renounced for the purposes of Part VIII tax as discussed in 36 above. The definition of "investment tax credit" in subsection 127(9) also excludes a qualified expenditure made after July 13, 1990 in the course of earning income from a business if any income from that business is exempt from Part I tax. However, such an expenditure is excepted from this rule if it was made before 1992 under a written agreement entered into on or before July 13, 1990, or if it was made for the purpose of completing the construction of property that was under construction by or on behalf of the

taxpayer on or before July 13, 1990. For the purposes of sections 127 and 127.1, subsection 127(11.2) provides that an expenditure to acquire capital property described in subparagraph 37(1)(b)(i) is deemed not to have been made until the property becomes available for use by the taxpayer, determined under subsections 13(27), 13(28) and 13(29) without reference to paragraphs 13(27)(c) and 13(28)(d).

Prescribed Expenditures

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Current expenditures

47. Prescribed expenditures within the meaning of section 2902 of the Regulations are not qualified expenditures and, therefore, do not earn investment tax credits. Prescribed expenditures include expenditures of a current nature incurred by a taxpayer for the general administration or management of a business, including:

(a) administrative salaries or wages and related benefits for a person whose duties are not all or substantially all directed to the prosecution of SR&ED, except to the extent that such expenditures are directly attributable to the prosecution of SR&ED as determined by subsection 2900(2) or (3) of the Regulations (see 17 to 20 above);

(b) a legal or accounting fee;

(c) interest and other financing costs described in any of paragraphs 20(1)(c) to (g) of the Act;

(d) an entertainment expense;

(e) an advertising or selling expense;

(f) a convention expense;

(g) a due or fee for membership in a scientific or technical society or organization; and

(h) a fine or penalty.

Prescribed expenditures also include current expenditures for the maintenance and upkeep of premises, facilities or equipment to the extent that such expenditures are not attributable to the prosecution of SR&ED.

48. A particular expenditure described in 47 above will not be a prescribed expenditure if it is incurred by a taxpayer that derives all or substantially all of its revenue from the prosecution of SR&ED (see 8 above). For example, under clause 2902(a)(i)(C) of the Regulations, an expenditure for interest made by a taxpayer will normally not be a qualified expenditure for the purposes of subsection 127(5) even if the expenditure is included in the SR&ED expenditure pool under subsection 37(1). However, if a taxpayer derives all or substantially all of its revenue from the prosecution of SR&ED, such an expenditure will not be prescribed and the taxpayer may be entitled to an investment tax credit. A taxpayer whose revenue is derived all or substantially all from the prosecution of SR&ED or from the sale of rights in or arising out of SR&ED carried on by the taxpayer is hereinafter referred to as a sole-purpose SR&ED performer.

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Sole-purpose SR&ED performer

49. In determining whether a particular taxpayer is a sole-purpose SR&ED performer consideration is given not only to the taxpayer's revenue in a particular taxation year but also to the pattern established over a number of taxation years. However, such pattern may not be relevant where the taxpayer's operations have changed significantly. In addition, for a start-up operation, the manner in which the taxpayer is proposing to derive its income will be taken into account. Consequently, if a taxpayer intends to manufacture, process and sell a product, or otherwise plans to actively exploit any technology developed, other than through the sale of rights to the product or technology, the taxpayer would not be considered a sole- purpose SR&ED performer.

50. A taxpayer that qualifies as a sole-purpose SR&ED performer may compromise its status as such if the taxpayer receives significant other income that is not derived from the prosecution of SR&ED or the sale of rights in or arising out of SR&ED. For example, interest income that represents a significant portion of a taxpayer's revenues may result in the loss of the taxpayer's status as a sole-purpose SR&ED performer. However, when the interest income is derived from the temporary investment of funds that are to be used in SR&ED activities and the funds are spent on qualifying research within a reasonable time, the interest income will generally not result in a loss of such status.

51. Income from the performance of SR&ED carried out on behalf of another taxpayer is generally considered to be revenue from the prosecution of SR&ED. Royalties earned from licensing the results of SR&ED or from the sale of such results (for example, a patent) are also generally considered to be revenue derived from the prosecution of SR&ED. However, income from a transaction that involves a licence but is in substance a sale of a finished product (for example, application software) is not considered to be revenue derived from the prosecution of SR&ED.

52. The expenses of a sole-purpose SR&ED performer are not necessarily all qualified SR&ED expenditures. As indicated in 46 above, a qualified expenditure as defined in subsection 127(9) must first be deductible under subsection 37(1). Consequently, expenditures incurred by a sole- purpose SR&ED performer for activities that do not constitute SR&ED, such as market research or sales promotion, are not qualified expenditures because they are not expenditures on SR&ED.

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Capital expenditures

53. Prescribed expenditures also include certain expenditures of a capital nature. An expenditure to acquire property that was neither incurred for nor was not all or substantially all attributable to the prosecution, or to the provision of premises, facilities or equipment for the prosecution, of SR&ED (see 29 above) is a prescribed expenditure. Expenditures for the acquisition of qualified property, within the meaning assigned by subsection 127(9), are also prescribed expenditures. Furthermore, expenditures for the acquisition of property that has been used or acquired for use or lease, for any purpose whatever before the taxpayer acquired it are prescribed expenditures. To be considered not to have been used, the property must not only be new when the taxpayer acquired it but it must not have been acquired for use or lease or for any purpose whatever by any previous owner. As a result of these requirements, if a property that has been used or was acquired for a use (even though unused) is transferred to a new owner, eligibility for the investment tax credit is not transferable. The cost of a piece of equipment that is used regularly for demonstration purposes is considered to be a prescribed expenditure; however, new equipment that is demonstrated for or tested by a prospective purchaser of that particular piece of equipment would not normally be considered to have been used for a purpose.

Other prescribed expenditures

54. Expenditures made to acquire rights in or arising out of SR&ED and SR&ED expenditures that are deductible under section 110 are also prescribed expenditures under paragraphs 2902(c) and 2902(d), respectively, of the Regulations.

55. Under paragraph 2902(e) of the Regulations, a current or capital expenditure is a prescribed expenditure to the extent the taxpayer making the expenditure has received or is entitled to receive a reimbursement for the expenditure from a person resident in Canada other than:

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(a) Her Majesty in right of Canada or a province, or an agent thereof;

(b) a corporation, commission or association that is controlled, directly or indirectly in any manner whatever, by a person described in (a); or

(c) a municipality in Canada or a municipal or public body performing a function of government in Canada.

In addition, an expenditure for which a taxpayer has received or is entitled to receive a reimbursement from a person that is not resident in Canada will also constitute a prescribed expenditure to the extent that the reimbursement is deductible by the non-resident in computing the non-resident's taxable income earned in Canada for any taxation year. Accordingly, where the non-resident cannot deduct the reimbursement the related expenditure of the taxpayer is not a prescribed expenditure. Although the determination of whether a taxpayer has received or is entitled to receive a reimbursement is generally a question of fact dependent on the contractual arrangements that exist between the parties, a payment a taxpayer has received or is entitled to receive under a "fixed-fee" or similar contractual arrangement would not normally constitute a reimbursement. However, a payment under an arrangement that specifically provides for the repayment of a taxpayer's expenditures will generally be a reimbursement.

Government Assistance, Non-government Assistance and Contract Payments

56. For purposes of calculating a taxpayer's investment tax credit, paragraph 127(11.1)(c) specifies that the amount of a qualified expenditure made by a taxpayer must be determined without reference to subsections 13(7.1) and 13 (7.4). However, the qualified expenditure must be reduced by the amount of any government assistance, non- government assistance (see 33 above), or contract payment in respect of the qualified expenditure that, at the time of filing the taxpayer's tax return for the year in which the expenditure was made, the taxpayer has received, is entitled to receive or can reasonably be expected to receive.

57. A "contract payment" as defined under subsection 127(9) includes the following amounts:

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(a) an amount (other than a prescribed amount) payable by a Canadian government, municipality or other Canadian public authority or by a person exempt from Part I tax under section 149 for SR&ED to be performed for it or on its behalf,

(b) an amount payable after December 20, 1991, for SR&ED to the extent that it can reasonably be considered to have been performed for, or on behalf of, a person entitled to a deduction in respect of the amount because of subparagraph 37(1)(a)(i) or clause 37(1)(a)(ii)(D), or

(c) an amount payable before December 31, 1991

(i) by a person resident in Canada for SR&ED related to the business of that person, or

(ii) by a person that is not resident in Canada if the non-resident payer is entitled to a deduction under clause 37(1)(a)(ii)(D) in respect of the amount payable.

For the purposes of (a) above, a prescribed amount is described in section 4606 of the Regulations as an amount received from the Canadian Commercial Corporation in respect of an amount received by that Corporation from a foreign government, foreign municipality or other foreign public authority. The situation described in (ii) above could occur when a non-resident operates a branch in Canada and the amount of the payment is deductible in computing the income from a business the non-resident carried on in Canada.

58. Paragraph (e.1) of the definition of investment tax credit in subsection 127(9) provides that a taxpayer who repays government assistance, non-government assistance or a contract payment will be entitled to an investment tax credit for the repayment to the extent that the assistance repaid had previously reduced the amount of the taxpayer's qualified expenditures, as discussed in 56 above. In addition, after 1990, the amount of assistance that was applied to reduce the amount of a qualified expenditure (by reason of paragraph 127(11.1)(c)) that was not received by the taxpayer in a taxation year and ceased to be an amount that the taxpayer may reasonably expect to receive, is deemed by subsection 127(10.8) to be an amount of assistance repaid by the taxpayer in the year.

Acquisition of Control

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59. If control of a corporation has been acquired by a person or group of persons, subsections 127(9.1) and (9.2) and paragraphs (j) and (k) of the definition of investment tax credit in subsection 127(9) may apply to restrict the availability of the corporation's investment tax credits. In general, these provisions limit the application of investment tax credits to the tax on the income from a particular business carried on by the corporation before the acquisition of control or any other business substantially all the income of which is from the sale, leasing, rental, or development of properties or the rendering of services similar to those of the particular business carried on by the corporation before the acquisition of control.

Rates

Specified percentage

60. The investment tax credit for qualified expenditures on SR&ED is initially determined by applying a specified percentage to the amount of the qualified expenditure that is incurred in the year. The specified percentage applied to a qualified expenditure on SR&ED varies depending on the location in Canada the SR&ED project is carried out. Generally, subparagraph (e)(iv) of the definition of specified percentage in subsection 127(9) provides for a rate of 20%. However, if the SR&ED is carried out in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick or the Gasp, Peninsula such subparagraph provides for a specified percentage of 30%.

Additional amount for certain corporations

61. Under subsection 127(10.1) certain corporations may be entitled to an additional amount of investment tax credit for qualified expenditures up to a

yearly expenditure limit of $2 million. The additional amount provided by subsection 127(10.1) increases the effective rate of investment tax credit on such expenditures to 35%. To qualify for this additional amount, a corporation must meet the following conditions. For a particular year, the corporation must be a Canadian controlled private corporation (CCPC) throughout the taxation year. Its taxable income for its immediately preceding taxation year, together with the taxable incomes of all corporations with which it is associated in the particular year for their taxation years that ended in the preceding calendar year, cannot exceed the total of the CCPC's and the associated corporations' business limits (as determined under section 125) for those preceding years. A corporation will not be prevented from qualifying for the additional amount in its first taxation year simply because it did not have an "immediately preceding taxation year."

Short taxation year

62. In the event a taxpayer's taxation year is less than 51 weeks, paragraph 127(10.6)(b) provides that the $2 million expenditure limit will be prorated on the basis of the number of days in the taxation year. Also, subsections 127 (10.2) and 127(10.3) provide that the $2 million expenditure limit must be shared among associated corporations. Where a CCPC has more than one taxation year in the same calendar year and is associated with another CCPC in two or more of these taxation years, paragraph 127(10.6)(a) provides that the expenditure limit of the CCPC for each taxation year in that calendar year in which it is associated with the other CCPC will be the amount that would have been the CCPC's share of the expenditure limit for the first such taxation year (had there been only one taxation year in that calendar year) prorated on the basis of the number of days in each short taxation year.

Repayments of assistance

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63. Paragraph (e.1) of the definition of investment tax credit in subsection 127 (9) provides that a taxpayer making a repayment of government assistance, non-government assistance or a contract payment in a particular year will be entitled to an amount of investment tax credit (calculated at the rate described in paragraph (f) of the definition of "specified percentage" in subsection 127(9)) in the particular year to the extent that the repayment had reduced the amount of the taxpayer's qualified expenditures in a preceding year, as described in 58 above. Under subsection 127(10.7), a taxpayer making such a repayment may be entitled to an additional amount of investment tax credit. The additional amount of investment tax credit added in the year of repayment is equal to the amount to which the taxpayer would have been entitled under subsection 127 (10.1) in the preceding year (if the assistance repaid had not reduced the amount of qualified expenditures) less the amount determined under subsection 127(10.1) for the preceding year.

Refundable Investment Tax Credits

General

64. Section 127.1 provides that a taxpayer, other than a person exempt from tax under section 149, having filed form T2038 containing prescribed information, is deemed to have paid, on account of the taxpayer's Part I tax for the year, the lesser of the taxpayer's refundable investment tax credit for the year and the amount designated by the taxpayer on form T2038.

65. The refundable investment tax credit for a taxation year is defined by subsection 127.1(2). Generally, for a "qualifying corporation" (described in 66 below), an individual other than a trust and a trust each beneficiary of which is either a qualifying corporation or an individual other than a trust, the refundable investment tax credit is 40% of the unclaimed balance of the investment tax

credit earned in the current year for qualified expenditures on SR&ED. In addition, a qualifying corporation, other than an "excluded corporation" (described in 66 below), may be refunded any portion of the unclaimed balance of the investment tax credit earned in the year at the effective rate of 35% (see 61 above) for its SR&ED expenditures of a current nature. Investment tax credits earned by other taxpayers are no longer refundable for expenditures made after 1987.

Qualifying corporation and excluded corporation

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66. A "qualifying corporation" is a corporation that is a Canadian- controlled private corporation (CCPC) throughout the taxation year whose taxable income for the immediately preceding taxation year, together with the taxable incomes of all corporations with which it was associated in the particular year for their taxation years that ended in the preceding calendar year, does not exceed the total of the CCPC's and the associated corporations' business limits (as determined under section 125) for those preceding years. A corporation is an "excluded corporation" if, at any time during the year, it is a corporation that is either controlled (directly or indirectly, in any manner whatever) by, or is related to:

(a) one or more persons exempt from Part I tax under section 149,

(b) Her Majesty in right of a province, a Canadian municipality or any other public authority, or

(c) any combination of the above.

Reduction of available investment tax credits

67. Amounts deemed by subsection 127.1(1) to be paid on account of a taxpayer's Part I tax are deemed by subsection 127.1(3) to be amounts deducted under subsection 127(5). Consequently, such amounts reduce the taxpayer's investment tax credits available for carryback or carryforward.

AMALGAMATION AND WINDING-UP

Continuation of Predecessor Corporations

68. Where there has been an amalgamation of two or more corporations, as defined in section 87 (see the current version of IT-474, Amalgamations of Canadian Corporations), paragraph 87(2)(l) provides that the new corporation is deemed, for the purposes of section 37 and Part VIII, to be the same corporation as, and a continuation of, each predecessor corporation. Similarly, where there has been a winding-up of a taxable Canadian corporation to which subsection 88(1) applies (see the current version of IT-488, Winding-up of 90% Owned Taxable Canadian Corporations), paragraph 88(1)(e.2) causes paragraph 87(2)(l) to apply so that the parent corporation is deemed for the purposes of section 37 and Part VIII to be the same corporation and a continuation of its subsidiary.

Capital Cost of Research Property

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69. For the purpose of section 37.1, where there has been an amalgamation of two or more corporations, the new corporation's capital cost of a research property acquired from a predecessor corporation is deemed to be equal to the capital cost to the predecessor corporation under subparagraph 87(2)(l.1)(iii). This, together with subparagraph 87(2)(l.1)(iv), has the effect of deferring any potential recapture of SR&ED allowance as described in 41 above. For this

purpose, a predecessor corporation includes any corporation that was itself an amalgamated corporation. Where a subsidiary's research property was acquired by its parent as a result of a winding-up to which subsection 88(1) applies, subsection 37.1(4) deems the property to be research property of the parent and, if the capital cost of the property to the subsidiary exceeds the subsidiary's proceeds of disposition, the capital cost to the parent will be deemed to be the subsidiary's capital cost so that any potential recapture of SR&ED allowance is deferred.

Availability of Investment Tax Credits

70. Paragraph 87(2)(qq) provides that, for the purposes of calculating the investment tax credit of a newly amalgamated corporation at the end of any particular taxation year, the amalgamated corporation is deemed to be the same corporation as, and a continuation of, any predecessor corporation. For windings-up to which subsection 88(1) applies, paragraph 88(1)(e.3) provides for the flow-through of investment tax credits from a subsidiary corporation to a parent corporation. These provisions allow the amalgamated or parent corporation to claim any unused investment tax credit of predecessor or wound-up subsidiary corporations. Such claims are subject to the time limits described in the definition of investment tax credit in subsection 127(9).

PARTNERSHIPS

SR&ED Expenditures

71. In calculating a partner's share of the income or loss of a partnership for a taxation year under subsection 96(1), paragraph 96(1)(e.1) requires that the partnership income for the year be calculated as if the amounts available under subsection 37(1) in its SR&ED expenditure pool were deducted. Consequently, a partnership is unable to carry forward SR&ED expenditures for deduction in a subsequent year. In addition, paragraph 96(1)(g) provides that, in calculating the share of a partnership loss that is deductible by a "specified member" of the partnership for a taxation year, a loss from any source or sources in a particular place must be reduced by any amounts deducted under section 37 in calculating the partnership income from that source or sources in a particular place. For the purposes of paragraph 96(1)(g), the term "specified member" of a partnership is restricted to any member of the partnership who is a "limited partner" as defined in subsection 96(2.4). In regard to the application of paragraphs 96(1)(e.1) and 96(1)(g), please refer to the Act for certain transitional rules that may apply, for taxation years of partnerships ending after December 15, 1987, to expenditures made by the partnership after December 15, 1987 and before 1989.

72. In circumstances where paragraph 96(1)(g) restricts the amount of a partnership loss that a limited partner can deduct, the amount that is not deductible is not allowable to other members of the partnership, does not constitute a "limited partnership loss" (within the meaning of subsection 96 (2.1)) for the purposes of subsection 111(1), and does not reduce the amount of the adjusted cost base of the taxpayer's partnership interest.

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Allocation of Investment Tax Credits

73. Subsection 127(8) provides for the allocation of the amount that may reasonably be considered to be a partner's share of the investment tax credits of the partnership to a taxpayer that is a partner at the end of the fiscal period of the partnership. An allocation of investment tax credits is generally considered to be the partner's reasonable share of the investment tax credits if it is made in the same proportion in which the partners have agreed to share any income or loss and if section 103 of the Act is not applicable for the agreement to share any income or loss.

74. Under paragraph 127(8)(b), an investment tax credit earned by a partnership for a SR&ED expenditure, and for a repayment of government assistance, non-government assistance or a contract payment that reduced the cost of a qualified expenditure under paragraph 127(11.1)(c), cannot be allocated to a taxpayer that is a "specified member" of the partnership within the meaning assigned by subsection 248(1). A specified member of a partnership in a fiscal period or taxation year is a member who is a limited partner as defined in subsection 96(2.4) of the partnership at any time in the period or year. A specified member can also be any member of the partnership other than a member who on a regular, continuous and substantial basis throughout that part of the period or year during which the business of the partnership is ordinarily carried on and during which he or she is a member of the partnership is:

(a) actively engaged in those activities of the partnership business other than its financing, or

(b) carrying on a similar business as that carried on by the partnership in its taxation year, otherwise than as a member of a partnership.

To be considered actively engaged in the activities of a partnership a partner would normally be expected to contribute time, labour and attention to the business of the partnership to a sufficient extent that such contributions would be a determinant in the successful operation of the business. In regard to the application of subsection 127(8), please refer to the Act for certain transitional provisions that may apply to expenditures made after December 15, 1987 and before 1989.

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75. Subsection 127(8.3) provides that the amount by which certain of the partnership investment tax credits exceeds the total of the amounts determined under subsections 127(8) and (8.1) to be a limited partner's share of those investment tax credits will be reallocated to partners who were members of the partnership throughout its fiscal period and who were not limited partners during that fiscal period. The investment tax credits that may be reallocated under subsection 127(8.3) include those earned for SR&ED expenditures and for repayments of government assistance, non-government assistance or contract payments that reduced the amount of an expenditure under paragraph 127(11.1)(c). The amount that may be reallocated to a particular partner that was not a limited partner is the portion that is reasonable in the circumstances considering the partner's investment in the partnership, including debt obligations of the partnership. The provisions of paragraph 127(8)(b) will apply to prevent a specified member that is not a limited partner from adding, in computing that member's investment tax credit for the year under subsection 127(8), any investment tax credits reallocated under subsection 127(8.3) for SR&ED expenditures and for repayments of government assistance, non-government assistance or contract payments that reduced the amount of an expenditure under paragraph 127(11.1)(c). Furthermore, investment tax credits that, because of paragraph 127(8)(b), cannot be allocated to a partner described in paragraph (b) of the definition "specified member" in subsection 248(1) cannot be reallocated to other partners. As a result, those investment tax credits are not otherwise available for carryforward or carryback. Where subsections 127(8) and 127(8.3) would require an amount to be included in calculating a partner's investment tax credit for a taxation year, the partner may elect under subsection 127(8.4), in the partner's return of income under Part I for the year, to have any portion of that amount deemed not to have been added in calculating the partner's investment tax credit at the end of the year.

76. Under subsection 127(12), investment tax credits allocated to a partner under subsection 127(8) that may reasonably be considered to relate to depreciable property are deemed, for the purposes of subsection 13(7.1), to have been received by the partnership, at the end of its fiscal period in which the allocation was made, as assistance from a

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government for the acquisition of depreciable property. Similarly, under subsection 127(12.1), investment tax credits allocated to a partner under subsection 127(8) that may reasonably be regarded as relating to current expenditures on SR&ED will reduce the total of the current expenditures on SR&ED that may be claimed by the partnership at the end of the fiscal period in which the allocation was made. In circumstances as described in 75 above, where a partner elects, under subsection 127(8.4) (that a portion of the investment tax credits that would have otherwise been allocated to that partner be deemed not to have been required under subsection 127(8) to be included in calculating the partner's investment tax credit), the elected portion of the investment tax credit will not reduce the capital cost of depreciable property acquired or the amount of SR&ED expenditures that may be deducted under subsection 37(1) in calculating the partnership income.

If you have any comments regarding the matters discussed in this bulletin, please send them to:

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Explanation of Changes for Interpretation Bulletin IT-151R4: Scientific Research and Experimental Development Expenditures

Introduction

The purpose of the Explanation of Changes is to give the reasons for the revisions to an interpretation bulletin. It outlines revisions we have made as a result of changes to the law, as well as changes reflecting new or revised departmental positions.

Overview

Interpretation bulletin IT-151R4 explains the provisions of section 37 that permit taxpayers who perform scientific research and experimental development (SR&ED) to deduct expenditures incurred for SR&ED carried on in Canada when calculating their income from a business. It explains how the SR&ED expenditure pool is calculated and describes both current and capital expenditures on SR&ED. The bulletin also describes the deductibility of expenditures for SR&ED carried on outside Canada. In addition, the bulletin now includes a description of the investment tax credit provisions related to SR&ED and the tax consequences to partnerships incurring SR&ED expenditures. We have undertaken the current revision to incorporate the changes to the SR&ED provisions enacted in 1988 by Bill C-139, in 1991 by Bill C-18, and in 1993 by Bill C-92.

Generally, the bulletin does not reflect the proposed Amendments to the Income Tax Act and Regulations announced by the Department of Finance on December 2, 1992. However, the positions set out in paragraphs 17 to 20 of the bulletin are based on certain of the proposed amendments to the income tax regulations that are effective for taxation years ending after 1989.

Legislative and other changes Generally, we have rewritten the bulletin to improve clarity, and have revised the order of the paragraphs to improve the bulletin's cohesiveness.

New 1 has been added to provide readers with an index.

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New 2 was added to define SR&ED.

New 3 (former 1) was revised to reflect the amendments to subsection 37(1) that eliminate the requirement for SR&ED expenditures to be made in Canada. It was also revised to reflect the amendment to subsection 37(1) that allows SR&ED expenditures not only to be deducted from the income of the business to which the expenditures on SR&ED relate but to be deducted from the income from any other business carried on by the taxpayer. This paragraph was also revised to reflect the amendment to section 37 eliminating the expression "class of business," which prevents a SR&ED expenditure from being deductible under subsection 37(1) if it does not specifically relate to a business of the taxpayer. In addition, as a result of the repeal of paragraph 20 (1)(t), the reference to that paragraph has been eliminated from the revised bulletin.

New 4 (former 6) has not been changed.

New 5 (former 2) has been revised to incorporate the amendment to subsection 37(1) eliminating the requirement for a taxpayer to have incurred the SR&ED expenditures in the year in which the deduction from the SR&ED expenditure pool was claimed. The amendments allowing SR&ED expenditures to be deducted from the income of another business carried on by the taxpayer and eliminating the expression class of business as discussed in new 3 are also reflected in this paragraph. In addition, former 2 has been revised to reflect the amendments to paragraphs 37(1)(d) and (e) which require the SR&ED expenditure pool to be reduced by the amount of any government or non-government assistance received for SR&ED expenditures, and by the amount of investment tax credits (ITCs) claimed for preceding years on current expenditures on SR&ED. Before these amendments, the pool would have been reduced, under paragraph 37(1)(d), only by the amounts of assistance received under an Appropriation Act and, under paragraph 37(1)(e), by the amount of ITC claimed in the current and preceding years.

New 6 (former 3) has been revised to reflect the amendment discussed in new 3 eliminating the expression "class of business."

New 7 (former 4) has been slightly reworded.

New 8 (former 5) has been substantially revised because of the enactment of paragraph 37(7)(e). An explanation of this new provision has been incorporated into this paragraph to indicate that, in and by itself, SR&ED is not a business of a taxpayer unless all or substantially all of the taxpayer's revenue is derived from the prosecution of SR&ED. Also, the wording in this paragrapg concerning the "all or substantially all" test has been revised to reflect the comments made in the decision in Douglas Wood v. MNR, 87 DTC 312, (1987) 1 C.T.C. 2391. As a result, new 8 now indicates that the test for something to be "all or substantially all" will be met if 90% or more of whatever is being measured is met.

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New 9 was added to the bulletin to explain that subsection 37(1.1) allows a corporation's expenditures on SR&ED to be "related to a business of the taxpayer" if the SR&ED relates to a business in which a related corporation is actively engaged.

New 10 (former 9) was revised to reflect the renumbering of subparagraphs 37 (1)(a)(ii) to (vi), and the amendments to new subparagraph 37(1)(a)(ii). These amendments require that a taxpayer making a payment described in that subparagraph must be entitled to exploit the results of the SR&ED for the payment to be included in the SR&ED expenditure pool. This paragraph has also been revised to reflect the amendment discussed in new 3 eliminating the expression class of business.

New 11 (former 9) explains the term "approved" as it is used in section 37. We have added to this paragraph the address where organizations should write to obtain the "approved" status. Former 9 also contained a position that suggested that contributions to organizations described in former subparagraphs 37(1)(a)(ii) and (iii) (now clauses 37(1)(a)(ii)(A) and (B)) should be expended by a certain time. This position was intended to provide guidelines to organizations described in clauses 37(1)(a)(ii)(A) and (B) that were granted "approval" on the stipulation that they would spend the funds they received on SR&ED within a reasonable time frame, and that two years from the date they received the funds would be considered reasonable. However, since this position could be misinterpreted to mean approved organizations identified in clauses 37(1)(a)(ii)(A) and (B) were subject to constraints to which other organizations described in subsection 37(1)(a)(ii) were not subjected regarding the spending of funds received from taxpayers seeking a deduction under that subparagraph, the position has been deleted.

New 12 was added to describe situations when a taxpayer is considered to be entitled to exploit the results of SR&ED.

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New 13 was added to explain subparagraph 37(1)(a)(iii) that deals with payments made to non-profit research corporations for pre- competitive basic research made on behalf of corporate members.

New 14 (former 10) was changed to reflect the comments made in Douglas Wood v. MNR as previously discussed in new 8. We have also added an example describing wages that are all or substantially all attributable to SR&ED.

Former 15 contained an administrative position that indicated that if a taxpayer intends to sell experimental production, and the taxpayer applies the income derived from the sale to reduce the amount of current SR&ED expenditures, the direct production costs and the current SR&ED expenditures which result in that production are considered to be all or substantially all attributable to SR&ED. This administrative position was originally intended to provide relief to taxpayers at a time when expenditures had to be wholly attributable to SR&ED. The introduction of clause 37(7)(c)(ii)(B) relaxed the "wholly attributable" rule, and allows expenditures that are directly attributable to SR&ED to qualify for the subsection 37(1) deduction. As a result, the relief this position was originally intended to provide is no longer required. In addition, a recent decision by the Tax Court of Canada (Cultures Laflamme (1984) Inc. c. MRN) does not support this administrative position. Accordingly, former 15 was deleted.

New 15 (former 7) describes current expenditures on SR&ED carried on in Canada, and has been revised to reflect the amendment to subsection 37(1), outlined in new 3, that eliminated the requirement for such expenditures to be made in Canada. Also, as a result of amendments to paragraph 37(1)(b) described in new 26, the position in former 7 that explains the distinction between current and capital expenditures on SR&ED was revised.

New 16 (former 8) has been slightly reworded.

New 17 to 20 (former 11 to 14) describe expenditures that are directly attributable to SR&ED carried on in Canada. For purposes of clause 37(7)(c)(ii)(B), expenditures that are directly attributable to SR&ED are described in subsections 2900(2) and 2900(3) of the Regulations, subject to subsection 2900(4) thereof. However, these three subsection of the Regulations caused significant administrative difficulties when determining expenditures directly attributable to SR&ED. First, paragraph 2900(2)(b) required that an expenditure for salaries had to have been paid before it could be directly attributable to SR&ED. Secondly, the wording of paragraphs 2900(2)(c) and 2900(3)(b) could

be interpreted to prevent portions of expenditures from being directly attributable to SR&ED. Furthermore, subsection 2900(4) could be interpreted to prevent remuneration based on profits paid to arm's length employees, who were not specified shareholders of the payer, from being directly attributable to SR&ED.

Among other changes to the SR&ED incentive program, draft amendments to the Regulations released by the Department of Finance on December 2, 1992 proposed to amend paragraphs 2900(2)(b), 2900 (2)(c) and 2900(3)(b) so that, for 1990 and subsequent taxation years, accrued salaries and portions of expenditures are not prevented from being directly attributable to SR&ED. 17 to 20 of the bulletin have been revised to reflect these proposed amendments. 17 and 20 reflect the amendment to paragraph 2900(2)(b) that permits accrued salaries to be expenditures that are directly attributable to SR&ED. The administrative position contained in former 11 that allowed certain accrued remuneration at year end to be considered paid is no longer necessary and has been deleted. New 18 and 19 now provide a more generous position concerning factory overheads and general and administrative expenses, and emphasize that the method used to allocate such expenditures must be reasonable.

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With the proposed repeal of subsection 2900(4), and the proposed introduction of new subsection 37(8), the draft legislation released on December 2, 1992 clarifies that all remuneration based on profits is not prevented from being directly attributable to SR&ED. Because proposed subsection 37(8) also reflects a change in policy which is to come into effect after December 2, 1992, this clarification also comes into effect at that time. However, 20 has been revised to include an administrative position that reflects the Department of Finance's intention that subsection 2900(4) not prevent remuneration based on profits from being directly attributable to SR&ED when it is paid to employees who deal at arm's length with the payer and who are not specified shareholders of the payer.

Since the bulletin generally applies to expenditures incurred after December 15, 1987, the application statement has been changed to indicate that 17 to 20 apply to the 1990 and subsequent taxation years because these paragraphs reflect the retroactive amendments to paragraphs 2900(2)(b), 2900(2)(c) and 2900(3)(b) of the Regulations. Former 11 to 14 of IT-151R3 will continue to reflect our position until new 17 to 20 apply.

Former 20 dealt with the requirement that a capital expenditure had to be made in Canada to qualify as an SR&ED expenditure. As discussed in new 26, the amendment to paragraph 37(1)(b) eliminated this requirement. Former 20 also referred to IT-50 which lists the criteria used to determine when the expenditure was made. The enactment of subsection 37(1.2), which deems expenditures not to have been made until the property is available for use, also eliminates the need to refer to that bulletin. As a result, former 20 is no longer required and has been deleted.

New 21 and 22 were added to describe the restriction on rental expenses and certain other similar payments contained in new subparagraphs 37(7)(f)(ii) and (iii).

Former 22 dealt with the deductibility of expenditures for buildings used partly for SR&ED. The introduction of paragraph 37(7)(f) generally prevents expenditures for leasing or acquiring buildings from being deductible under section 37. As a result, former 22 is no longer required and has been deleted.

New 23 and 24 (former 31 and 16) have been slightly reworded.

Former 25 listed some of the programs providing assistance under an

Appropriation Act. This information is no longer necessary because of the amendment to paragraph 37(1)(d) as discussed in new 5. As a result, former 25 has been deleted.

New 25 (former 17) was revised to reflect the amendment to subsection 37(5) by replacing the references to section 110 therein with references to sections 110.1 and 118.1.

New 26 (former 18) was revised to reflect the amendments to paragraph 37(1)(b) eliminating the requirement for capital expenditures on SR&ED to be made in Canada, and permitting only those expenditures for property, that would otherwise have been depreciable property to the taxpayer, to be included in the SR&ED expenditure pool.

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New 27 describes new subsection 37(1.2) that deems that expenditures for property are not made until the property is available for use by the taxpayer.

New 28 (former 19) was revised to reflect the amendments to paragraphs 13 (7.1)(a) and 13(7.1)(e) that require the separate prescribed class for capital expenditures on SR&ED to be reduced by the amount of any government or non-government assistance received for these capital expenditures. Before these amendments, the class would have only been reduced by certain payments received under an Appropriation Act. This paragraph was also revised to reflect the amendment to paragraph 37(1)(e) discussed in new 5.

New 29 (former 21) was revised to reflect the comments made in Douglas Wood v. MNR as previously discussed under new 8. This paragraph was also changed to emphasize that the initial intention is determinative in establishing whether an expenditure is all or substantially all attributable to SR&ED. The subsequent use of the property will generally not override the initial intention, but it is an indicator of the original intention.

New 30 was added to describe subparagraph 37(7)(f)(i) that prevents expenditures for buildings (other than prescribed special-purpose buildings) from qualifying for a deduction under section 37. It also outlines the definition of a prescribed special purpose building.

New 31 (former 23) was revised to clarify that, for projects involving SR&ED and commercial production, the taxpayer should determine the eligible expenditures on SR&ED by segregating the eligible SR&ED activities and ineligible production activities, and identifying the expenditures related to each.

New 32 (former 24) was revised to reflect the amendment to paragraph 37(1)(d) discussed in new 5.

New 33 was added to describe the definitions of government and non-government assistance. This was necessary because of the amendment to paragraph 37(1)(d) described in new 5.

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New 34 was added to clarify whether interest-free loans from a government will constitute government assistance.

New 35 (former 26) was revised to reflect the amendment to paragraph 37(1)(e) discussed in new 5.

New 36 (former 27) explains that expenditures renounced to generate a Part VIII tax refund reduce the pool of SR&ED expenditures. Because Part VIII tax refunds are no longer available, the explanation of the refund calculation in former 27 is no longer relevant and was eliminated from new 36.

New 38 (former 29) has been revised to reflect the amendment to subsection 37(2). A taxpayer making a payment to an approved association for SR&ED carried on outside Canada must be entitled to exploit the results of the SR&ED for the payment to be deductible under that subsection.

New 44 to 67 were added to describe investment tax credits that may be available for qualified SR&ED expenditures. These describe which SR&ED expenditures qualify for an ITC, how a taxpayer may use an ITC to reduce taxes payable, and the circumstances when an ITC may be refunded. These paragraphs also describe the conditions certain taxpayers have to meet to be entitled to the enhanced ITC rate and for certain of their ITC's to be fully refundable.

68 to 70 (former 34 and 35) that describe the impact an amalgamation has on the SR&ED expenditure pool and investment tax credit pool have been expanded to address the impact a winding-up will have on these pools.

New 71 to 76 have been added to explain certain provisions of the Act specific to partnerships incurring SR&ED expenditures.

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APPENDIX E:

Revenue Canada s
Information Circular
IC86-4R3

[1] Assumptions: 1) the taxpayer can utilize the deduction of $100; 2) federal tax rate of 29.12%; and 3) provincial tax rate of 15.5%.
[2] Federal Part I income tax is the regular tax on income from business, property and employment.
[3] A third party payment is the type of payment referred to in s.37(1)(a)(ii) of the Federal Act.
[4] A third party payment is the type of payment referred to in s.37(1)(a)(ii) of the Federal Act.

NO.: **86-4R3** DATE: May 24, 1994

SUBJECT: **Scientific Research and Experimental Development**

This circular replaces and cancels Information Circular 86-4R2, dated August 29, 1988.

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1 Introduction

1.1 The purpose of these technical guidelines is to clarify what constitutes scientific research and experimental development according to the Income Tax Regulations, as set out in subsection 2900(1) of the Regulations.

1.2 Part 2 of this circular provides the key to identifying eligible scientific research and experimental development activities in all areas specified in subsection 2900(1) of the Regulations: i.e., basic research, applied research, and experimental development.

1.3 Parts 3 to 7 of this circular further clarify the technical aspects of our interpretation of subsection 2900(1) of the Regulations. They also outline the key characteristics of eligible versus ineligible activities as follows:

Part 3 – Requirements for scientific and technical content and documentation

Part 4 – Characteristics of experimental development

Part 5 – Identifying eligible activities associated with collecting data

Part 6 – Identifying eligible activities in the fields of computer science and associated technologies

Part 7 – Determining when an experimental development project is complete

1.4 The term "experimental development" was added to the description of the relevant sections of the *Income Tax Act* in May 1985. These sections now refer to "scientific research and experimental development" rather than simply to "scientific research." The May 1985 Budget Papers issued by the Department of Finance Canada stated that the phrase "experimental development" was meant to confirm that "projects involving only routine engineering or routine development" would be excluded. "Experimental development" is thus set out as an aspect of the more general concept of "development." Only development activities associated with "experimental development" are eligible.

1.5 **This circular examines only the technical issues** involved in characterizing eligible scientific research and experimental development activities. Judgements on technical matters require the opinions of scientists, engineers, and other technical experts. Therefore, we have directed this circular to technically trained individuals who have to identify activities that are eligible. The current version of IT-151, *Scientific Research and Experimental Development Expenditures*, explains how to identify qualifying expenditures.

1.6 Part 8 deals with administrative matters, and is followed by an index and a glossary.

2 General Considerations in Identifying Eligible Activities

2.1 Ultimately, the question of what constitutes scientific research and experimental development for purposes of the *Income Tax Act* can only be resolved by referring to the facts of each case.

2.2 Statutory and general definitions

2.3 Science is a branch of study in which phenomena are observed and classified and, usually, in which quantitative and qualitative relations are formulated and verified. Subsection 2900(1) of the Regulations defines scientific research and experimental development (SR&ED) as requiring a "systematic investigation or search carried out in a field of science or technology through experiment or analysis." Here, technology refers to the systematic study of the application of scientific knowledge to industrial processes or product development.

2.4 Subsection 2900(1) of the Regulations goes on to define the following categories of scientific research and experimental development:

(a) basic research, namely, work undertaken to advance scientific knowledge without a specific practical application in view;

(b) applied research, namely, work undertaken to advance scientific knowledge with a specific practical application in view;

*(c) experimental development, namely, work undertaken to achieve technological advances for the purpose of creating new, or improving existing, materials, devices, products, or processes, including incremental improvements thereto, or

*(d) work with respect to engineering, design, operations research, mathematical analysis, computer programming, data collection, testing, and psychological research, where such work is commensurate with the needs, and directly in support of the work described in paragraphs (a), (b), or (c) above.

*Note: Changes to part c) and the addition of part d) above to the definition of SR&ED reflect the draft amendment to subsection 2900(1) of the Regulations announced in December 1992, which has yet to be promulgated.

2.5 Subsection 2900(1) of the Regulations further states that SR&ED does not include work for:

- market research or sales promotion;
- quality control or routine testing of materials, devices, products, or processes;
- research in the social sciences or the humanities;
- prospecting, exploring, or drilling for or producing minerals, petroleum, or natural gas;
- the commercial production of a new or improved material, device, or product, or the commercial use of a new or improved process;
- style changes; and
- routine data collection.

2.6 Major issues

2.7 Two major issues in defining scientific research and experimental development are:

- how to distinguish between eligible activities that advance scientific or technological knowledge and exclude activities that are "routine engineering or routine development", and
- how to distinguish eligible experimental development activities from ineligible commercial activities.

2.8 We determine whether an activity is eligible or ineligible under subsection 2900(1) of the Regulations solely by examining the nature and characteristics of the activity itself.

In other words, it is not the overall purpose of the activity or program, but rather what is actually occurring at a technical level that is relevant. This is an important point because the intent of all development in a business context is to produce viable products or processes. Thus the key point relating to the Act and Regulations is whether or not an activity has the characteristics of an eligible scientific research and experimental development activity, and not the overall goals in a commercial sense.

2.9 General criteria

2.10 Essential tests that must be met before any activity can be considered scientific research and experimental development include the criterion of scientific or technological advancement; the criterion of scientific or technological uncertainty; and the criterion of scientific and technical content.

2.10.1 The **criterion of scientific or technological advancement** is as follows:

- The search carried out in the scientific research and experimental development activity must generate information that advances our understanding of scientific relations or technologies. In a business context, this means that when a new or improved product or process is created, it must embody a scientific or technological advancement in order to be eligible.

2.10.2 The **criterion of scientific or technological uncertainty** is as follows:

- Whether or not a given result or objective can be achieved, and/or how to achieve it, is not known or determined on the basis of generally available scientific or technological knowledge or experience. This criterion implies that we cannot know the outcome of a project, or the route by which it will be carried out without removing the technological or scientific uncertainty through a program of scientific research or experimental development. Specifically, scientific or technological uncertainty may occur in either of two ways:
  - it may be uncertain whether the goals can be achieved at all; or

- the taxpayer may be fairly confident that the goals can be achieved, but may be uncertain which of several alternatives (i.e., paths, routes, approaches, equipment configurations, system architectures, circuit techniques, etc.) will either work at all, or be feasible to meet the desired specifications or cost targets, or both of these.

- The scientific or technological uncertainty, rather than the economic or financial risk, is important in characterizing scientific research and experimental development — and, hence, eligible activities.
- Sometimes there is little doubt that a product or process can be produced to meet technological objectives when cost targets are no object. In commercial reality, however, a reasonable cost target is always an objective, and attempting to achieve a particular cost target can at times create a technological challenge which needs to be resolved. A technological uncertainty may thus arise that is imposed by economic considerations. Otherwise, the more general question of the commercial viability of the product or process is not relevant to whether or not a technological uncertainty is present and, hence, to whether a project is eligible or ineligible.
- This criterion applies equally to work on new or existing processes or products. The description of technological uncertainty contained in this subsection applies wherever the text of this circular refers to the criterion.

2.10.3 The **criterion of scientific and technical content** is as follows:

- The scientific research and experimental development activity must incorporate a systematic investigation going from hypothesis formulation, through testing by experimentation or analysis, to the statement of logical conclusions. Such experimentation can include work on the evolution of prototypes or models. In a business context, this means that the objectives of the scientific research and experimental development projects must be clearly stated at an early stage in the project's evolution. In addition, the method of experimentation or analysis by which the scientific or technological uncertainties are to be addressed must be clearly set out. Finally, the results of the succeeding scientific research and experimental development efforts have to be properly identified. The need for a systematic program of investigation does not preclude ideas that result from intuitive processes. Such ideas are hypotheses, however, and must still be tested through a systematic program before they can be accepted.
- Qualified personnel having relevant experience in science, technology, or engineering are responsible for directing or performing the work.

2.11 Application of criteria

The three criteria of IC 86-4R3 must be applied within the context of the taxpayer's business environment.

Scientific research and experimental development varies in content as well as in the complexity of the technology in a given field. The technical uncertainties encountered by one taxpayer may well be looked upon as facts easily obtained by another. The judgement as to eligibility should be made within the context and environment of a single company and its field of business. Specifically, the activities undertaken to resolve technical uncertainties are eligible if the taxpayer cannot obtain the solutions through commonly available sources of knowledge and experience in the business context of the firm. We expect that any firm claiming expenditures for scientific research and experimental development activities will have or will access the expertise necessary to carry out a viable program.

2.12 Not all the work elements in a scientific research and experimental development activity will involve scientific or technological uncertainty. To conform to the spirit of the legislation, however, the overall activity must contain scientific or technological uncertainties. That is, the search for a meaningful advance in the body of scientific or technological knowledge should be present as a guiding element in every eligible project. This requirement is satisfied whether or not the activity is successful. In other words, determining that a hypothesis is incorrect also represents a scientific or technological advance.

2.13 The definition of "experimental development" in subsection 2900(1) of the Regulations requires that work be undertaken to achieve technological advancement when creating new, or when slightly improving existing materials, devices, products, or processes. For an experimental development activity to be eligible in terms of scientific research and experimental development, it must conform to the spirit of the legislation; that is, it must seek to advance the taxpayer's technological knowledge base. The technological advance achieved has only to be slight.

Achieving a technological advance would require removing the element of technological uncertainty through a process of systematic investigation. This may occur when technologies established in one field are introduced into products or processes in another field of technology. The improvement of existing technologies or methodologies using well-established "routine engineering or routine development" would be ineligible if the outcome is predictable. A straightforward design development, for example, is not an eligible activity. However, as noted earlier (2.4d), if the "routine" engineering or "routine" development activity is carried out in support of an eligible experimental development project, then the activity is eligible.

2.14 In summary: If the primary objective is to make further technological advances in the product or process, then the work meets the criteria for experimental development. If, on the other hand, the technological character of the product or process is substantially set, and the primary objective is to develop markets, to do preproduction activity, or to get a production or control system working smoothly, then the work no longer meets the criteria. However, if technological

uncertainty exists under these circumstances, then work on studies to resolve the technological problems may still be eligible. This is amplified in later sections.

3 Requirements for Scientific and Technical Content and Documentation

3.1 It is usual in scientific research and experimental development to expect that a planned approach to the project will be formulated; that is, a hypothesis will be advanced, and a systematic series of experiments or analyses will be planned to test the hypothesis.

Each project should be documented showing clearly why each major element is required, and how it fits into the project as a whole. To build on the results of testing in a systematic way requires the organized documentation of work undertaken in the elements of experimentation or analysis. The systematic progression of the activity is built on analyzing the results from step to step — the "systematic investigation or search" called for in subsection 2900(1) of the Regulations – and is the essence of the experimental method. If claims for scientific research and experimental development are to be defended, it is important for a firm to maintain dated documents of the original technological goals of the project, the progress of the work and how it has been carried out, and the project's conclusions.

We also expect that the indicators or measures to be used to determine if the technological objectives of the project are met will be identified when forming the concepts for the program. These measures should also be documented at the early stages of the program. Failure to have such documentation indicates the absence of a systematic program of scientific research or experimental development. Note that failure to achieve the objectives does not negate the validity of the experimental development program.

4 Characteristics of Experimental Development

4.1 Eligible activities must generate information that advances our understanding of scientific relations or technologies. A technological advance is incorporating, by means of experimental development, a characteristic or capability not previously existing or available in standard practice, into a new or existing process or product that enhances a product's performance. Novelty, uniqueness, or innovation alone do not indicate a technological advance.

4.2 A key distinction between eligible and ineligible activities is the difference between experimental development and development based solely on "standard practice" in established fields of engineering or technology. Standard practice refers to directly adapting a known engineering or technological practice to a new situation when there is a high degree of certainty that the known technology or practice will achieve the desired objective. Specifically, projects predominantly using "standard practice" are based on commonly available experience, and development activities based on it generally are ineligible. When "standard practice" is used to support an eligible experimental development activity, the associated activities are of course eligible. Ultimately, the final judgement of what is or is not standard practice in a given field of technology can only be made by specialists familiar with that field.

4.3 Adapting a known technology or practice to new situations is ineligible when the routes for the progression of work that will lead to successful solutions to a technological or engineering problem can be identified in standard practice. In other words, if the project involves directly adapting a known technology to a new situation, when it is reasonably certain that the approach will work, it is ineligible. If a technological uncertainty is present, however, then experimental development will occur, and an experimentally based study will be required which goes beyond standard practice. Essentially, the presence of a technological uncertainty puts the project into the realm of experimental development when solutions cannot be based on standard practice alone.

4.4 A claim for qualifying expenditures should clearly explain all departures from standard practice in the experimental development activity.

4.5 In experimental development, the outcome is uncertain because the present level of technology (state-of-the-art) is insufficient, or because the compatibility of new combinations of technologies is uncertain. Resolving the technological uncertainty will result in a technological advance, and it is the work on resolving these uncertainties that characterizes an eligible experimental development activity. Neither the failure nor the success of a project proves that technological uncertainty exists. It is the reason why the failure or success occurs that is important. Failure arising because of inexperience, improper application of standard practice, lack of information, or financial constraints, does not in itself indicate that a technological risk is present.

4.6 When complex combinations of technology occur, the criterion distinguishing between eligible experimental development and ineligible development is again the element of technological uncertainty. If a complex engineering activity results in a new product or process, the development of which was the almost certain outcome of applying a progression of well-known techniques, it cannot be classified as an eligible experimental development activity. This equates to assembling a jigsaw puzzle where each of the pieces is well-defined, and it can be expected that, with a given amount of effort and reasonable technical skills, the final product can be assembled.

4.7 In any experimental development program, there is the usual progression of activities from the conception of an

idea through to full-scale production. There are two types of activities that can be associated with any component in this progression:

(a) those based solely on standard practice (e.g., minor modifications, troubleshooting, debugging, etc.), when the outcome is predictable and thus the activities are ineligible; and

(b) those requiring technological advancement (new or improved product or process characteristics), which are eligible.

The central problem in any multifaceted experimental development program is to identify which components are eligible, and which are not (i.e., which belong in either (a) or (b) above). Any point along the entire process from initial conception to the time when commercial production begins has the potential to contain an eligible activity of experimental development.

4.8 Work on combining standard technologies, devices, and/or processes is eligible if non-trivial combinations of established (well-known) technologies and principles for their integration carry a major element of technological uncertainty; this may be called a "system uncertainty." If the technological specifications or objectives to resolve the "system uncertainty" are such that the basic design of the underlying technologies must be changed to achieve the integration, the current costs of the overall project may qualify. More often, it will be necessary to separate those activities which are eligible from those which are not. In such situations, a central problem is to determine which work relates to the eligible activity (i.e., which routine engineering activities are carried out in "support" of the requirements of the eligible activity), and which do not.

When the specifications for components requiring advances in technology do not significantly affect the design requirements of other components in complex projects, only individual studies carried out to meet the advanced design requirements of the activity are eligible. When advanced technological specifications require redesigning closely related components, then the activities associated with redesigning the associated components are eligible. These considerations apply to the assessment of any custom design project (customization), pilot plants which have commercial potential, and prototypes which are ultimately sold.

4.9 When it is necessary to distinguish between eligible and ineligible activities in complex projects, accounting procedures have to be established to reflect this requirement.

5 Identifying Eligible Activities Associated With Collecting Data

5.1 For activities associated with collecting or monitoring data to qualify, the data must be collected directly for the purpose of resolving a scientific or technological uncertainty associated with an eligible activity. Often, the analysis of large collections of survey data can be used to resolve a technological uncertainty, even if the data are not specifically or directly collected for the needs of the eligible scientific research or experimental development activity. In these cases, only the activities associated with analyzing the data would be eligible, not the actual data collection. For the activities to be eligible, a systematic approach to collecting (study design) must be followed which provides only the amount of data needed for the specific scientific or technological uncertainty being studied. In other words, systematic study design will be focussed on providing the amount of information appropriate to resolving the issue. Specifically, the dimensions or size of data collections, for which the collection costs qualify, should agree with the requirements that can be determined from well-established statistical considerations for developing good experimental designs.

5.2 The above should not be taken as excluding completely the practice of using testing protocols that do not strictly follow statistical considerations, if such tests are needed to resolve a specific scientific or technological uncertainty. Nevertheless, collecting excessive amounts of data is generally not consistent with a systematic investigation, and would generally be grounds for questioning the eligibility of the collection activities (but not for questioning the activities associated with analyzing the data).

5.3 Often, a qualifying scientific research and experimental development activity is carried out together with environmental, geological, or hydrological surveys, regular exploration, or other generally ineligible activities. The collection costs for the ineligible activity that would usually be incurred still will not qualify, even if an experimental development project has been attached to such surveys or exploration activities or testing.

However, in these cases, it would be appropriate to consider, as a qualifying cost, the added current expenditures arising from including the research program. For example, data could be collected to test a new approach for collecting data. To verify this new approach, it would be appropriate to incorporate this testing into a program for regular collection or monitoring; only the added costs for testing the new system would qualify.

5.4 When a hypothesis about a scientific or technological uncertainty is tested through projects involving experimentation, that experimentation will involve data collection. Further, we regard the data collection involved in all such experimentation as being an eligible activity when the size of the data collection matches the needs of the study. While the specific parameters being measured may be commonly encountered quality or processing parameters, we will consider their measurement to be eligible when the experiment directly conforms to the needs of the experimental activity. This is in direct contrast with the type of data collection that occurs in everyday commercial operations, where the primary objective of such analyses is product or process monitoring to demonstrate adherence to

specifications, supervision of processes, and control of finished product characteristics. We do not consider these last to be qualifying expenditures.

5.5 None of the costs for collecting data needed in the usual course of managerial duties — such as for quality control, inventory control, cost control, delivery control, and process or product monitoring in commercial situations — qualify.

5.6 Costs for collecting data to be used as baseline data or to support developments based solely on standard engineering or technological practice do not qualify. Such data generally are of the following type:

(a) data on the physical properties of sites, such as hydrological, geological, and geophysical data used by architects, engineers, agricultural technologists, and geophysicists in the usual course of their professional tasks, when no eligible scientific research and experimental development activity is present; or

(b) descriptive data such as population census collections or descriptions of the flora and fauna in a region, used as baseline data, or similar collections of hydrological, geological, or geophysical data.

However, in some fields of basic or applied science, purely descriptive data are collected in projects that seek to make meaningful advances in the knowledge base of these fields. For such projects to be considered as eligible activities in scientific research and experimental development, the project objectives would have to be recognized as constituting the search for a significant advancement by a professional research scientist working in the field.

5.7 The collection of data using repetitive, standardized procedures or protocols, seeking to establish whether parameters are within the usual boundaries, characterizes much routine testing. Examples are regular clinical testing for medical diagnostic purposes, or the monitoring of commercial production processes. The costs of collecting such data do not qualify. Of course, the costs for using the same or similar experimental protocols or procedures may qualify when they meet the requirements of eligible scientific research and experimental development activities.

6 Criteria for Identifying Eligible Activities in Computer Science and Associated Technologies

The following addresses the problem of what is an advance directly in computer science and associated technologies. Activities such as programming and coding, that are commensurate with the needs and directly in support of an eligible project in other fields are eligible activities.

6.1 Computer science is a discipline that draws upon advances made in numerous other fields of science, particularly electrical and electronic engineering, and mathematics. It is a discipline where advances in hardware and software arise from the unique application of combinations of technologies and ideas to developing methods of manipulating, structuring, and communicating data through computers.

6.2 It is how the data are manipulated, organized, or communicated, and whether or not the methodology in question represents an advance over the technology of data manipulation or communication commonly available in the industry concerned, that is important in determining what is an eligible activity in this field. It is not the nature or purpose of the data being manipulated or communicated that is at issue.

6.3 As noted, novelty or innovation alone in the product or process does not demonstrate that an eligible activity exists. It is how the novelty arises (i.e., whether or not it arises from the resolving technological uncertainties) which is important. In this respect, although it can be said that every new or improved computer program is unique in some aspect, to be eligible under subsection 2900(1) of the Regulations, a new or improved program must represent a scientific or technological advance. An effort to achieve such an advance will result in a significant departure from the usual established practice in business. It results from a situation when there is a technological uncertainty about the method of achievement of, or the actual achievement of, the advanced technological objective.

6.4 It is important to realize that uncertainties can also arise from non-technical sources, such as the failure to use available information, lack of programming knowledge (incorrect application of existing principles), or lack of technical management expertise (such as underestimating difficulties in downsizing, language translations, or hardware interfacing, or the incorrect specification of technological requirements). A technological uncertainty, on the other hand, arises when the solution is not readily apparent to someone familiar with the basic stock of commonly used knowledge and techniques within the business context of the firm. Only activities aimed at resolving technological uncertainties are eligible.

6.5 As concerns programming associated with application software, custom software, data management, and numerical analysis, a common component of eligible activities is often the development of new, advanced algorithms (procedures and subroutines), or the use of algorithms new to a particular area of business to resolve a technical uncertainty in that area of business.

6.6 In general, we expect that, in multifaceted software projects, while some aspects of the project may qualify, others will not. In other words, only those aspects or components that attempt to resolve a technological uncertainty will qualify.

Other aspects of developing the overall software program would usually be ineligible unless the characteristics of the advance create, or leave remaining, major uncertainties about

whether the overall technological objectives of the project can be achieved. In these cases, the work associated with the overall project may be eligible.

However, if resolving the technological uncertainty later requires modifying associated established components, then work on those modifications will be eligible. Additional aspects of the integration generally would not be eligible. In such cases, segregating activities (with documentation) among the project components would be appropriate.

6.7 Customizing software involves changes to meet the individual requirements of a user. While such changes often require a significant amount of coding and other work, customization assignments are usually in the nature of "fine-tuning" or maintenance. These activities are generally ineligible because technological uncertainties usually are not involved. However, if an activity required to resolve a technological uncertainty is identified, then the costs associated with this work will qualify.

6.8 Work on improving or advancing the user interface in computer systems, including developing technological objectives for the user interface, can be an integral part of eligible experimental development activities. Such activities may include research on specifying user requirements. They are eligible when carried out directly in support of the needs of an activity that itself is established as eligible. All market research activities, including those directed at market development and market verification, general market identification, market demonstration, market preference, and development of customer acceptance, are ineligible.

6.9 Regarding software, the cutoff for experimental development is the point when the product or process can be or is used in routine operations. If problems should emerge in the commercial use of the product, and resolving them contains technological uncertainties, then it should be considered a new project for purposes of subsection 2900(1) of the Regulations. The qualifying activities in the new project are only those that are needed to resolve the newly encountered technological uncertainty, and not the costs for finding out that a problem exists once a product is used in routine operations. Similarly, a customer may find defects in established products. Work undertaken in correcting such defects are eligible activities only if a new technological uncertainty is identified and addressed.

6.10 The following are comments on what constitutes advances in specific areas of computer science and associated technologies. They are intended to provide guidance, but they are not intended to be definitive or to preclude work in other areas. Obviously, what constitutes an advance in any area still must be judged in light of the "state-of-the-art" in that area at the time when the project is undertaken.

(a) **Theoretical computer science** deals with what is computing, what can or cannot be done with computing, and how it can be done. This includes, for example, complexity analysis and language theory. Generally, the technological or scientific advances in this area produce new theorems and algorithms. As in any scientific or technological endeavour where uncertainty exists, some eligible activities are expected to have negative results.

(b) **Operating systems** provide services in a computer system for (i) managing resources such as files, processes, memory, and time; and (ii) managing interfaces such as those with the user, with machines, and with communications systems. Technological advances consist in a technological improvement in (i) or (ii); a truly new operating system; or converting an operating system to a significantly different hardware environment. In disputed cases, computer scientists with experience in the particular area in question need to assess what is "significantly different."

(c) Technological advances in **programming languages** are new languages; significant extensions to an existing language; and new or significantly different language translators.

(d) **Applications software** (including customized software) involves developing software systems for particular uses. In addition to the situations previously outlined, technological advances may occur when a development represents a significant technological step forward (e.g., new combinations of established computer program components or known programming principles), provided that this integration requires resolving technological uncertainties.

(e) **Data management** involves the definition, organization, accessing, manipulation, and storage of data within a computer system. This includes what is generally called databases, data structures, and data algorithms. Technological advances include developing algorithms to achieve significantly better basic operations (e.g., retrievals from a database); new or enhanced query languages for databases which significantly increase the power of search or manipulation capabilities; and new object representations or data structures.

(f) **Software engineering** involves the study, in terms of basic or applied research, of the methodology for the design, implementation, testing, and performance evaluation of software systems; that is, advances in the methodology required to construct computer programs with greater flexibility, efficiency, reliability, and ease of maintenance.

(g) **Artificial intelligence (AI)** involves the study of systems that perform functions parallel to those usually carried out by humans. Scientific and technological advances are made in areas such as machine vision, robotics, inference, knowledge representation, expert systems, theorem proving, natural language understanding, automatic language translation, logic programming, and future generation systems. In most areas of AI, there is not yet an established practice. However, the attempt to resolve a technological

uncertainty has to be demonstrated to provide a basis for establishing whether expenditures are eligible. Frequently in this area the existence of any kind of solution is uncertain, and the research effort will reflect this indeterminacy.

7 Considerations in Determining When an Experimental Development Project is Complete

7.1 The development of a new or improved product or process through a program of experimental development can be shown to occur in five stages:

(a) The definition of a concept or technological hypothesis together with a statement of corresponding technological objectives.

(b) The definition of a systematic program to achieve the technological objectives defined in (a). As far as possible, this will describe a technological development plan and program including various subprojects, milestones, and steps along the development path.

We expect that such a plan likely will have to be changed as the development progresses because of the uncertainties that characterize technological developments.

(c) The process or product is developed to the prototype or pilot stage for experimental or technical-trial purposes. That is, prototypes are to test the feasibility of the concept or hypothesis. Possibly, the construction of a whole series of pilots or prototypes may be involved, as problems are met and either overcome or bypassed. It may be that, in this phase of the development, the original objectives have to be modified significantly or perhaps even changed entirely, depending on the technological opportunities which become apparent. However, such cases should be regarded for purposes of subsection 2900(1) of the Regulations as a series of scientific research and experimental development projects with distinct and documented technological objectives.

(d) The product or process is developed to meet the requirements of commercial production. This stage may involve activities such as scaling up from pilot plant size to commercial size, or developing an economical means for manufacture. In many cases, the technologically successful prototype may have been fabricated using methods or materials which are too expensive to be practical for commercial production.

(e) Commercial utilization or production.

While the five stages are not always described by companies in the format given above, they are, nevertheless, involved in some manner in most technological developments. Variations do exist and are to be expected. For example, the third stage (c) is sometimes bypassed, and the "prototype" is developed to meet commercial requirements. In some cases, the development may consist of systematically constructing a series of prototypes, each incorporating the lessons learned from earlier prototypes.

7.2 When an experimental development project is involved, the work carried out in the first three stages is eligible. Difficulty may arise in determining whether some activities falling within the bounds of the fourth stage (d) are eligible. In this respect, the key issue is whether there is a technological uncertainty still to be overcome, or whether this stage can be carried out through standard practice (see Part 4). Activities associated with commercial production (the fifth stage) are not eligible as scientific research and experimental development activities.

7.3 The application of criteria that will determine whether an experimental development activity should be classified as complete will differ from case to case. It is useful to recognize the following general situations:

Situation 1: The development, design, and manufacture of multiple products in regulated and unregulated industries.

Situation 2: The design and construction of a specialized (customized) product (i.e., "one of a kind"), or of specialized products produced in small numbers in regulated and unregulated industries.

Situation 3: The development or upgrading of processes for sale and/or use by the developer.

However, the basic criterion for determining when a scientific research and experimental development project has been completed is reaching the point at which the project's initial technological objectives have been achieved. Generally, this occurs when the application of standard operating practices will permit the achievement of the technological performance objectives which were established when the project was defined.

Neither financial indicators (such as first sale) nor issuing warranties alone, for example, are adequate to mark where experimental development separates from commercial production.

7.4 "Regulated" means that the product or process has to meet some generally accepted, well-defined technological acceptance test or tests, or technological specifications, before it can be registered, marketed, or certified. These requirements may be established by either formal regulatory agencies, by the industries, or by other bodies offering certification.

7.5 In regulated industries where specifications for product performance, registration, certification, and/or safety are enforced or are generally accepted, studies required to meet these requirements or standards are eligible activities.

If, however, a product is sold initially in an unregulated or less stringently regulated market, the experimental development project is considered to be complete when the technological objectives required for the initial project are met. As markets are expanded, studies to demonstrate that

more stringent regulation or standards for registration or certification can be met are eligible as separate experimental development studies (see Note 1). These studies are complete when the data demonstrates whether or not the new regulations or standards have been met. Additional activities, such as the preparation of submissions or documents for licensing agencies, certification agencies, or regulatory authorities, are not eligible activities.

Note 1: Studies carried out to demonstrate that regulatory requirements or standards can be met are considered eligible activities because we assume that a technological or scientific uncertainty must be resolved to complete the product to the satisfaction of the regulatory authorities. These studies are complete when the data demonstrate that the technological uncertainty is resolved.

7.6 Market demonstrations, including customer acceptance studies, product verification, and marketing studies comparing a new product or process with those of competitors are part of the marketing process, and are not eligible activities regarding experimental development.

In both regulated and non-regulated industries, technological specifications are determined by commercial objectives and by end-user requirements. It is necessary to define these requirements and to devise corresponding internal technological specifications. It is appropriate that work on defining such technological specifications be eligible, so long as these specifications have contributed directly to the characterization of the technological objectives of a scientific research and experimental development project that is under way.

As noted previously, however, market research itself is an excluded activity under subsection 2900(1) of the Regulations.

7.7 Experimental development of a customized process or product is usually complete once the product or process meets the intended technological objectives. Putting the customized product to its intended use indicates that the experimental development has been completed at some earlier time.

When a customized process is ready to be developed on a commercial scale, experimental development is generally complete. However, technological problems may arise during the attempt to use the new technology, and the activities required to correct these may be classified as new, eligible scientific research and experimental development projects.

7.8 In general, the routine "scaling up" from prototype or pilot demonstrations is not eligible. However, specific scientific research and experimental development projects may be identified during this phase which will become eligible (see Part 4).

7.9 "Pilot plants" may sometimes be built to a commercial scale, or existing commercial plants may be modified so as to test and demonstrate new processes. In such instances, much technological advancement may be required, and eligible scientific research and experimental development may be involved in developing what will eventually be a commercial facility.

The qualifying expenditures for scientific research and experimental development within such projects must be separated from those which would usually be associated with constructing a commercial plant if the technology had already existed. The cost of the scientific research and experimental development activities should be isolated by accounting individually for their costs.

7.10 The usual manufacturing facilities may sometimes be employed in scientific research and experimental development activities to confirm the success of eligible process and/or product development projects. Appropriate costs incurred from using the facilities can be allowed if they meet the requirements of section 37 and if the use is documented as part of a preplanned, systematic development program. It is necessary to establish the specific periods of use.

7.11 Experimental development work for the purposes of creating new, or improving existing, materials, devices, products, or processes, including slight improvements, is complete when the technological objectives are met.

8 Administrative Comments

8.1 Departmental specialists or advisors

In addition to obtaining the advice of specialists in other federal departments and agencies, as authorized by subsection 37(3) of the Act, we may engage outside specialists to determine whether or not certain activities being carried on by a taxpayer qualify as scientific research and experimental development. Following a review of information contained in the taxpayer's submission by technical staff, we will decide if we need more information.

During an on-site examination, the specialist, accompanied by one of our auditors, will meet with the taxpayer's research personnel, and will review the activities for which questions still exist, to obtain sufficient information to make an informed opinion as to whether each activity qualifies as scientific research and experimental development.

8.2 Confidentiality

8.2.1 Commercial secrecy

Recognizing that scientific research and experimental development plans and activities have a vital bearing on a company's competitive position, and that the information is proprietary, we are required by law to treat any information that a taxpayer gives us in the strictest confidence. Such information may not be revealed to any person who does not have a need for it to perform the duties connected with administering the program. All documents that contain proprietary information submitted in connection with the program should be marked "Commercial confidential."

When we use the services of a specialist to evaluate claims for scientific research and experimental development, the

specialist falls within the provisions of section 241 of the *Income Tax Act*. The Act provides for fines and/or imprisonment if the provisions of section 241 are breached.

8.3 Advance rulings

Our issuing advance rulings regarding scientific research and experimental development has been limited to the financing aspects of such transactions.

8.4 Form T661

The T661 is a prescribed form that we require for filing claims for scientific research and experimental development under section 37 of the Act and subsection 2900(1) of the Regulations.

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Glossary

Associated established components

If the scientific research and experimental development is directly concerned only with some parts of a system or a technology, and resolving the technological uncertainty cannot be done without subsequently modifying other parts, then these other parts are considered associated established components.

Baseline data

Baseline data are a set of scientific or technological observations and measurements that are used as a base in further studies, and against which variations or change can be measured. Examples are pollution in a given environment, nature and rate of rejects on a production line, hydrological data to develop a dynamic model of hydropower capacity, etc.

Business environment

Business environment characteristics include business size, competition, area of industry, and access to technical resources. For example, an enterprise may not have practical access to information proprietary to a competitor, or known in specialist or academic circles.

Commercial production

Commercial production is the set of activities associated with the production of products, and it is expected that a profit will be made.

Commonly available sources of knowledge or experience

Commonly available sources of knowledge or experience are those that can reasonably be assumed to be readily available to those with basic training or experience in the field of concern. These resources enable them to be sufficiently qualified to participate in scientific research and experimental development. They also include knowledge that is available in the business context of the firm. See also the Glossary entry on "Business environment."

Cost targets and their relation to technological uncertainty

See Part 2.10.2 of the circular.

Customary product design or customary product evolution

Customary product design or customary product evolution is the use of generally known practices to design or improve a product or process when there is no need to resolve scientific or technological uncertainty.

Design

Design may be separated into engineering design and industrial design.

Engineering design is assembling established technological information on any subject, selecting whatever is pertinent, and from it, working out a practical, economical, and safe design. If the result does not meet expectations, the cause of failure would be either the incorrect application of engineering principles, or errors of information, neither of which would constitute a deficiency in essential scientific or technological knowledge.

Industrial design is the conception of potentially marketable products with due regard to their desired functions, properties of materials, harmonious integration of components, possibilities offered by various fabrication processes, required dimensions and shapes and, in general, aesthetic and economic considerations. Thus, industrial design often seeks to become functional at minimum cost.

Engineering and industrial design activities are eligible activities only when they are undertaken directly in support of projects that themselves satisfy the three criteria specified in Parts 2.9. to 2.10.3 inclusive.

Directly in support

An activity is considered to be directly in support of scientific research and experimental development when it is reasonable to believe that the activity is required to carry out the scientific research and experimental development. That is, it has been shown to be an integral part of the systematic investigation of a problem, and is required in the search for a theoretical or practical solution.

Hypothesis

A hypothesis is a tentative supposition with regard to an unknown state of affairs, the truth of which is thereupon subject to investigation by any available method, either by logical deduction of consequences which may be checked against what is known, or by direct experimental investigation or discovery of facts not hitherto known and suggested by the hypothesis (McGraw-Hill, *Concise Encyclopedia of Science and Technology*).

Intuitive processes

Intuitive processes are those that give rise to ideas without evident, ordered, rational thought or inference. Such activities can lead to hypotheses for testing that are a component of experimental development.

Market demonstration/customer acceptance

In a scientific research or experimental development project, market demonstration or customer acceptance does not include interaction with the customer to better define the product's technological specifications and thus to better

orient the project's scientific research and experimental development activities.

Market research

Market research includes (but not exclusively) surveys to determine consumer attitudes to existing products, or to possible new products.

The research, for example, examines such factors as buying habits, use of leisure time, consumer needs or wants, and attitudes towards existing products and new products being test-marketed. Sales promotion is the selling activity that supplements advertising and personal selling, co-ordinating them, and making them effective.

Meaningful advance

A meaningful advance means the generation of new knowledge that reduces technological uncertainty. Note that this can be negative (i.e., the sought result could not be achieved) or positive, in which case the advance is embodied in the resulting process or products or in new knowledge. See also the Glossary entry on "Systematic investigation or search."

Operations research

Operations research is an approach usually involving mathematical treatment of a process, problem, or operation to determine its purpose and effectiveness, and to gain maximum efficiency.

Pilot plant

A pilot plant is a non-commercial scale plant in which processing steps are systematically investigated under conditions simulating a full production unit. The goals may be, for example, to study the behaviour of certain raw materials, develop an economically viable process for manufacturing a new product or process or improve an existing product or process, modify equipment for new applications, test new equipment under new conditions, produce samples of a custom product for scientific research, determine environmental effects, and so on. The primary purpose of the pilot plant is to obtain engineering and other data needed to evaluate hypotheses, write product or process formulae, establish finished product technical specifications, or design special equipment and structures required by a new or improved fabrication process.

The construction and operation of a pilot plant is a part of experimental development, as long as the principal purposes are to obtain experience, and to compile engineering and other data to be used in:

- evaluating hypotheses;
- writing new product formulae;
- establishing new finished-product specifications;
- designing special equipment and structures required by a new process; or
- preparing operating instructions or manuals on the process.

Planned approach

Planned approach refers to a situation in which there is a recorded program of work with scientific and technical content. See also the Glossary entry on "Hypothesis."

Process optimization and cost reduction

Process optimization and cost reduction describe process development efforts that have as their objective improved efficiencies, output quality, or financial or strategic advantages. Although these activities can still be eligible when technological uncertainty is encountered, they are not usually considered to be scientific research and experimental development. Competent management of a commercial operation usually reflects the skills and knowledge necessary for greater efficiency, and lowers the unit costs of production. They are represented, for example, by the functions of industrial engineering, time and motion analysis, methods engineering, value analysis and engineering, tool and machine design, etc. When standard practices in these fields are used in any situation requiring an improvement, a trend towards optimal conditions will usually result, and the law of diminishing returns will be the only limitation upon attaining the degree of improvement. Only if a technological uncertainty must be overcome will an eligible activity exist, and the qualifying costs will be those needed to resolve the technological problem.

Prototype

A prototype is an original model on which something new is patterned, and of which all things of the same type are representations or copies. It is a basic experimental model possessing the essential characteristics of the intended product. The design, construction, and testing of prototypes generally fall within the scope of experimental development. This applies whether only one or several prototypes are made, and whether they are made at the same time, or one following the other. Constructing several copies of a prototype to meet a temporary need after successfully testing the original is not part of experimental development.

Routine engineering

"Routine engineering" is the practice of designing, composing, evaluating, advising, reporting, directing, or supervising the construction or manufacturing of tangible products, assemblies, systems, or processes that require in-depth knowledge of engineering science, and the proper, safe, and economic application of engineering principles. By definition, and according to sound professional practice, routine engineering practice does not involve appreciable scientific or technological uncertainty.

Social sciences

The social sciences include (but not exclusively) economics, geography, law, management, political science, and sociology. The humanities include, for example, art, philosophy, languages, history, and religion. Psychology is also a social science, but psychological research is not an excluded activity when it is undertaken directly in support of basic research, applied research, or experimental development.

Specialists

A specialist in a field is one who has gained, through training or experience, a significant understanding beyond that usually expected from general or only occasional activity within that field. The term "specialists" refers to engineers or scientists holding a university degree, or the equivalent, as recognized by the appropriate licensing body or professional or scientific society, or to individuals who have worked in the given field of technology or a closely related one for a significant period to be considered by their peers to have gained experience beyond the norm.

Style change

Style change means changing the physical appearance or arrangement of an article without altering its utility, efficiency, function, or operating characteristics.

System uncertainty

System uncertainty is recognizing that combinations of technologies, the components of which are generally well-known, frequently carry a risk of failing to perform to acceptable standards. Thus, while each individual technology is known, the results of interactions among them as a whole may not be known, and must be determined by a program of systematic investigation to determine the results of such interactions.

Systematic investigation or search

Systematic investigation or search is the use of a method that usually includes scientific or technological problem definition, hypothesis formulation, experimental tests, and deduction and conclusion to arrive at new or improved products or processes, or expanded knowledge. It includes analyses through physical, chemical, or biological experimentations, mathematical or computer simulations, or other analytical techniques.

Testing protocols

Testing protocols are the standardized methodologies or procedures used in scientific and technological endeavours.

Trouble-shooting

Trouble-shooting is routinely correcting equipment or processes by identifying problems. The goals may be to optimize a process in both the technical or economic sense, to adjust equipment performance or to evaluate it during breakdowns, improve working conditions, minimize production losses, or to control the generation and disposal of wastes.

Trouble-shooting occasionally brings out the need for further scientific research and experimental development, but more frequently it involves detecting faults in equipment or processes, and results in minor modifications of standard equipment and processes. Such detection and modification is not scientific research and experimental development.

Viable program

A viable program is one that is based on approaches and methods that are inherently capable of resolving the technological uncertainty in question (resulting in either success or failure, as the case may be).

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